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## ABSTRACT

Data on the financial position of Ontario's universities are provided. Among items covered by the report's 27 statistical tables and 18 graphs are: expenditures per client served, 1977-1987; percentage increase in provincial operating grants and total budgetary expenditures, 1977-1988; growth of Ontario government expenditures and grants to universities relative to the growth of the Ontario Gross Domestic Product, 1977-1988; interprovincial comparisons of operating grants to universities per full-time equivalent student; provincial operating grants for universities per \$1,000 of provincial personal income, 1977-1985; interprovincial comparisons of total operating expenses per client; percentage of universities' general operating income, 1986-1987; estimated tax capacity, tax revenue, and tax effort, 1987-1988; capital expenditures and borrowings, Province of Ontario, 1977-1988; salaries and wages, Ontario universities, 1977-1986; comparison of benefit costs, 1977-1988; index of expenditure on library acquisitions; buildings, land and site services, total expenses by province, 1986-1987; and costs of sponsored research and the operating base, 1977-1988. (SW)

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# THE FINANCIAL POSITION OF UNIVERSITIES IN ONTARIO: 1988

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THE FINANCIAL POSITION OF  
UNIVERSITIES IN ONTARIO: 1988

Prepared by  
the Research Division  
of the  
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June 1988

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THE FINANCIAL POSITION OF  
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## THE FINANCIAL POSITION OF UNIVERSITIES IN ONTARIO:

1988

This report on the financial position of Ontario universities continues and extends a pattern of analysis which has been developed over many years by the Council of Ontario Universities. It reviews trends over time and makes comparisons, among different sectors in Ontario and with other jurisdictions, to help put in perspective the adequacy of funding levels available to universities in this province. The most current data available are used throughout the report.

### Universities as a Priority in Ontario

The priority afforded to this province's universities by the Government of Ontario has declined steadily and substantially over the past decade. As can be seen in Figure 1 and Table .1, the universities' share of total government spending has declined from 5.92% in 1977-78 to 4.6% in 1988-89. This decline in priority will cost the universities \$438 million in operating grants in 1988-89 alone.

Provincial government expenditures have consistently grown faster than government grants to universities. As Figure 2 and Table 2 display, the government's expenditures increased at a rate a third faster than its grants to universities.

The provincial economy has also grown faster than university operating support. Figure 3 and Table 3 use the growth of the Ontario economy as a benchmark against which to measure the growth of Ontario government expenditure and operating grants to universities. While Ontario government expenditures, with or without public debt interest payments, have grown at about the same rate as the economy of the province as a whole, between 1977-78 and the late 1980's operating grants to universities expanded only 77% as much as the economy of the province.

While other publicly supported sectors have enjoyed real increases in their levels of support per client served, the position of Ontario universities has declined. Figure 4 and Table 4 show that hospitals, elementary and secondary schools, and institutions for adult offenders all have seen their per client expenditures increase faster than inflation. The position of post-secondary institutions, however, has declined. After the impact of inflation is eliminated, hospitals spent 27% more for each day of patient care in 1986-87 than they did in 1977-78. Universities, in contrast, spent 12% less for each full time equivalent student enrolled in 1986-87 than they did a decade earlier.

#### Interprovincial Comparisons

Government support per student to Ontario universities has traditionally been below the average for the rest of the country. Figure 5 and Table 5 demonstrate this point. In 1987-88, it is estimated that Ontario ranked sixth

among the ten provinces, or about \$250 per student below the average for the other nine provinces. Ontario's position on this indicator has improved recently, in part because of improved levels of support but largely because the position of universities in other provinces has declined.

Table 6 compares operating grants to universities according to the relative wealth of each province. In 1985-86, the most recent year for which data are available, Ontario ranked ninth on this indicator with a level of grants 25 to 30% below the average for the other provinces. Table 7 demonstrates that, on seven of the eight indicators used by the Tripartite Committee on Interprovincial Comparisons, Ontario ranks below the average for the rest of the country. Table 8 compares the level of funding received by universities in Ontario and the other provinces with that received by hospitals and schools. While Ontario ranks third in the amount of money that school boards spend per student and fourth in the amount hospitals spend per patient day of care, it ranks ninth in the amount universities spend per student.

Relative to its economic growth, Ontario ranks ninth out of the ten provinces in growth of operating grants to universities. Figure 6 and Table 9 compare rates of growth of operating grants to universities in Ontario with those in other provinces, but with the data standardized to each province's gross domestic product. They demonstrate that while, in the decade between 1977-78 and 1986-87, every provincial government in the country failed to increase operating grants to universities as fast as their respective economies were growing, the Ontario government fell further behind all other provinces except

British Columbia.

#### Comparisons With the United States

Across a range of indicators, recent evidence makes clear that many state jurisdictions in the United States have afforded a higher priority to universities than the Government of Ontario has given to universities in this province. Figure 7 shows that, during the decade between 1977-78 and 1986-87, the growth rate of state government appropriations for higher education per full-time equivalent student in the United States exceeded the rate of inflation. In Canada, during that same time period, provincial government grants to universities per full-time equivalent student declined by 15 to 20%. This decline is evident both in Ontario and in the nine other provinces.

Figure 8 focuses the analysis onto the most recent four years of available information and compares Ontario with eleven states which are either among the largest states in the country or are major states in close proximity to Ontario. While grants to universities in Ontario between 1982-83 and 1986-87 barely kept up with inflation, state appropriations in some American jurisdictions grew by 35 to 40 per cent.

Even before these recent increases, American state and local governments were spending more on higher education than their Canadian counterparts. As Table 10 shows, among eleven of the largest states, government spending on higher education in 1983-84 was, on average, about one-third greater than in Ontario.

Figure 9 and Table 11 demonstrate that Ontario universities receive less in the way of government grants than do similar institutions in the United States and that they are unable to draw upon other resources to the same extent as their American counterparts. Tuition fees are 70 or 80% higher at American public universities than at Ontario universities. At American private universities, they are about six times as great as in Ontario. Federal grants, largely for research, contribute twice the dollars per student at U.S. public universities and more than four times as much at private universities than they do in Ontario universities. Gifts and endowment income obtained by public universities in the United States are of about the same significance as in Ontario, but at private universities they bring in about four times as much revenue.

#### Impact on University Spending Patterns

Chronic underfunding affects all areas of our institutions. Table 12 and 13 indicate that Ontario universities receive a lower share of both their operating funds and their total revenue from the provincial government than do universities in almost every other province. To offset a consistent lack of provincial government support, Ontario universities have had to obtain a higher proportion of their income from tuition and other fees and from other sources of income.

Table 14 demonstrates that sponsored research expenditures have been growing at a faster rate than have the operating expenses more usually associated with instructional activity. The former have increased by about 50 per cent in the

past decade, once the impact of inflation is eliminated, while the latter expenses have barely increased enough to compensate for inflation and certainly have not increased enough to compensate for inflation and enrolment growth. All of this places additional strains on existing university facilities since sponsored research grants and contracts rarely cover the cost of overhead associated with the research activity.

Table 15 demonstrates that there has been a 16% decline in the constant dollar value of salaries and wages over the past decade. While Table 16 demonstrates a significant increase in the constant dollar value of employee benefits, it also shows that more than half of these additional costs were incurred in statutory benefits programmes over which universities have little or no control. The constant dollar costs of these statutory programmes increased by 38%. Unemployment insurance premium costs went up by 83% during the past decade. Figure 10 compares the cost of university benefit programmes with those incurred by the Ontario government. The provincial government's benefit package is significantly more expensive than that provided by universities.

Table 17 and Figure 11 illustrate the extent to which inflation has been particularly severe for non-salary items purchased by universities. The increase in the universities' non-salary price index has normally exceeded the CPI by significant amounts. With increases in the CPI expected to average between 4 and 5 per cent per year over the next five years, as shown on Table 18, non-salary costs experienced by universities are expected to average between 5 and 6 per cent per year.

In its operating grants for 1986-87, the Government made special provision for library acquisitions. As shown in Figure 12 and Table 19, this reversed a decade-long decline of 21 per cent in constant dollar expenses for library acquisitions (a 32 per cent decline when enrolment growth is taken into account).

Although significant improvements have been made in recent years (see Figure 13 and Table 20), the provision of capital funds for construction continues to be highly problematic. Table 21 demonstrates that, in 1986-87, Ontario universities spent less per student on buildings and related land and site services than did universities in all but one other province in the country. As a result of this long period of capital underfunding, as shown in Figure 14 and Table 22, Ontario university buildings are depreciating faster than they are being renovated or replaced. In effect, universities are living off their assets and not replacing what is being worn out. This was formerly also the case with equipment, but as seen in Figure 15, in recent years expenditures have been high enough to exceed depreciation.

#### Ontario Government Financial Resources

It is clearly evident that Ontario could afford to invest more in its universities. Table 23 indicates that the Ontario government raises less money per capita or as a share of provincial wealth than any other provincial government in the country. Table 24 suggests that this is also the case if local government revenues are taken into account. Figure 16 and Table 25 show

that, although Ontario has the second highest tax capacity per capita in the country, its tax effort (whether or not the deficit is taken into account) is the lowest in the country.

Despite Ontario's extremely low tax effort, the Ontario government consistently enjoys an operating surplus. As Figure 17 and Table 26 show, in eight of the past eleven years, the Ontario government has been able to finance all of its operating expenditures plus a large part of its capital expenditures from taxes, transfers and other revenue. What borrowing takes place comes from the Canada Pension Plan and the Teachers' Superannuation Fund and is used exclusively to cover capital spending.

#### One of the Returns on the Investment

All of the above should be judged within the context of the continuing economic importance of the university sector. Figure 18 and Table 27 provide some evidence of the economic benefits derived from university training. Unemployment rates among university graduates are about one third the level of those who did not go beyond high school. Participation rates in the labour force are over twice as great for university graduates as for those with eight years or less of education.

FIGURES AND TABLES

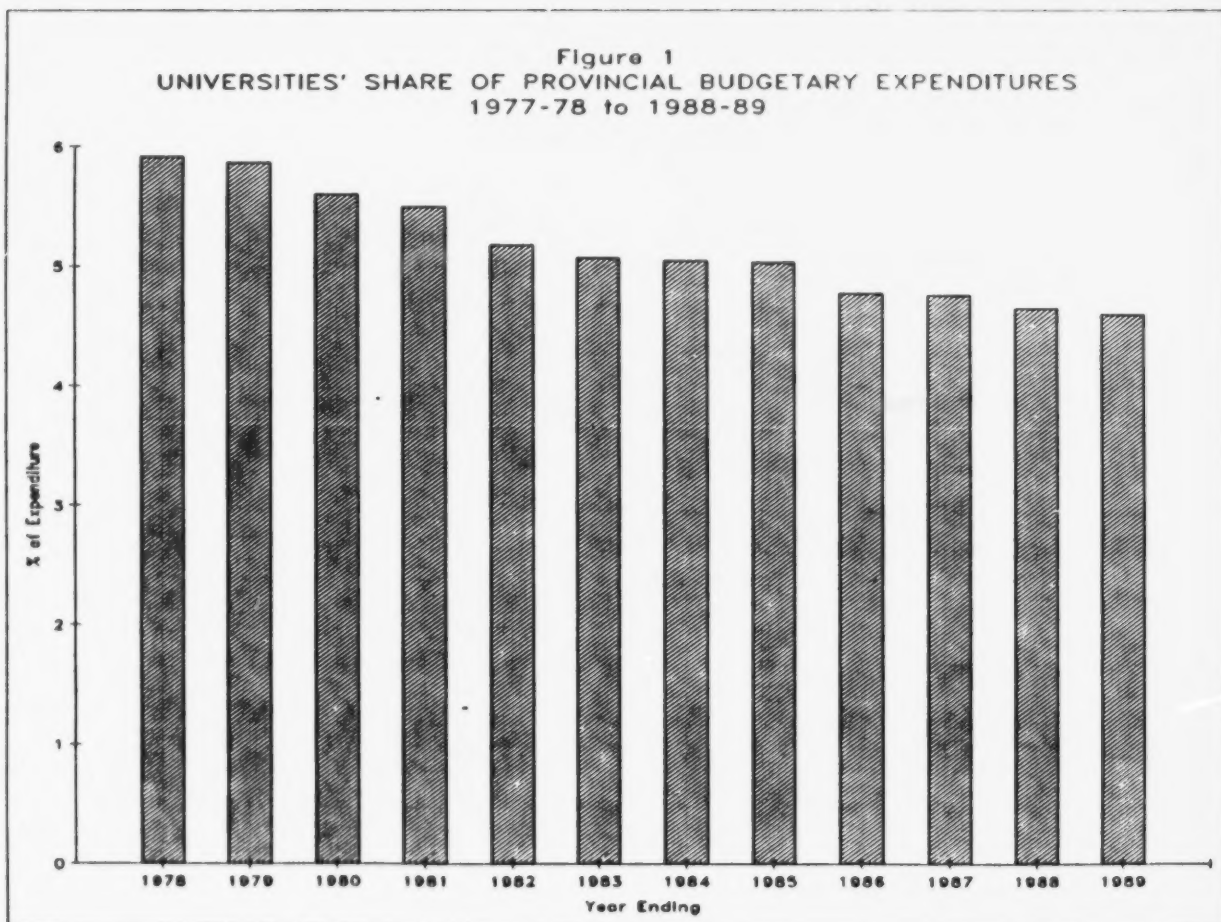


Table 1

Ontario Universities' Share of Provincial Budgetary Expenditures

(Excluding Public Debt Interest Payments)

|                      | <u>Universities' Share</u> | <u>Universities' Annual Shortfall from 1977-78 Level of Government Support</u> |                    |
|----------------------|----------------------------|--------------------------------------------------------------------------------|--------------------|
|                      | <u>£</u>                   | <u>£</u>                                                                       | <u>\$ millions</u> |
| 1977-78              | 5.92                       | -                                                                              | -                  |
| 1978-79              | 5.87                       | 0.86                                                                           | 4.1                |
| 1979-80              | 5.61                       | 5.22                                                                           | 40.5               |
| 1980-81              | 5.50                       | 7.09                                                                           | 61.1               |
| 1981-82              | 5.18                       | 12.43                                                                          | 127.8              |
| 1982-83              | 5.08                       | 14.22                                                                          | 167.8              |
| 1983-84              | 5.05                       | 14.62                                                                          | 186.4              |
| 1984-85              | 5.04                       | 14.86                                                                          | 202.3              |
| 1985-86              | 4.78                       | 19.26                                                                          | 297.2              |
| 1986-87              | 4.76                       | 19.60                                                                          | 326.8              |
| 1987-88<br>(interim) | 4.65                       | 21.40                                                                          | 388.1              |
| 1988-89<br>(budget)  | 4.60                       | 22.23                                                                          | 438.4              |

Source: Ontario, Public Accounts, various years.  
1988 Ontario Budget

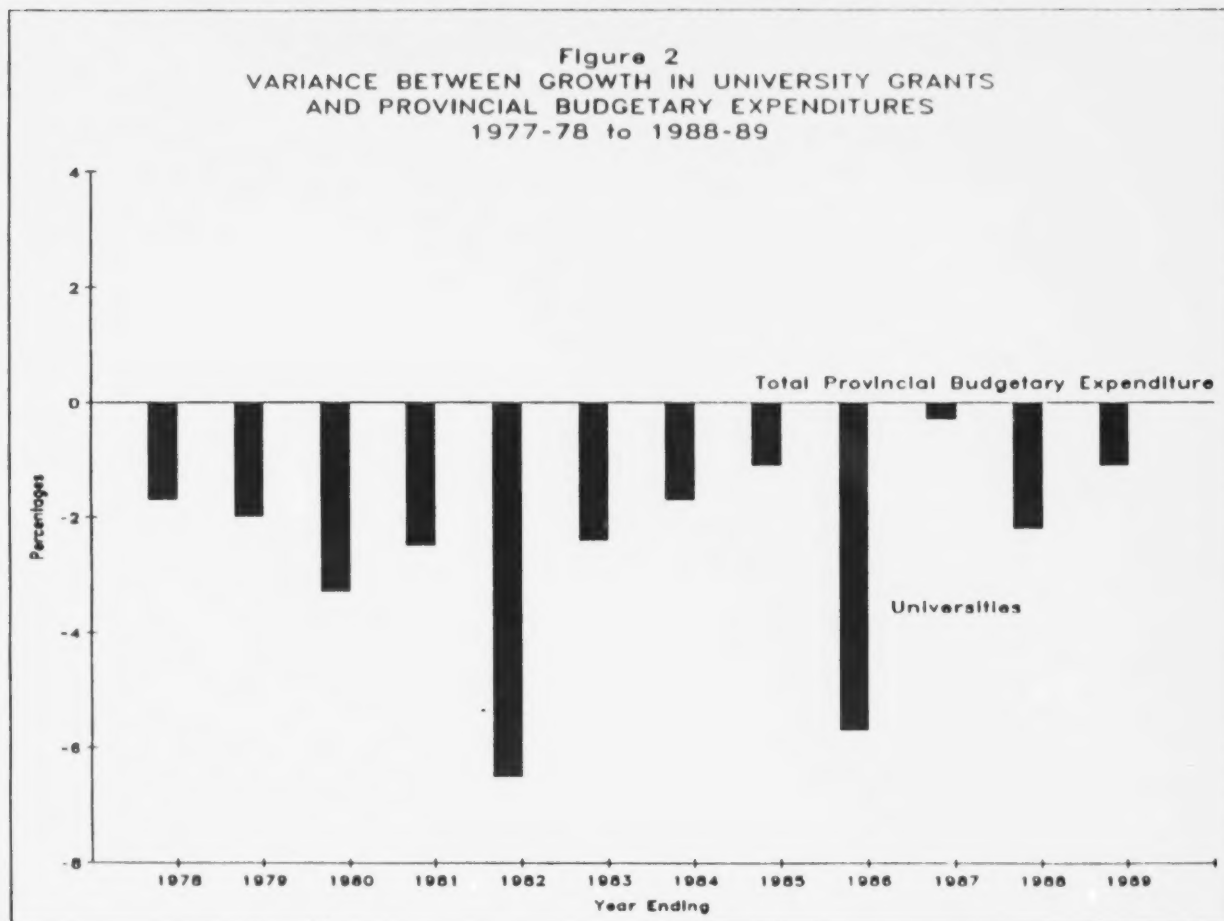


Table 2

Percentage Increase in Provincial Operating Grants  
and Total Budgetary Expenditures  
1977-78 to 1988-89

|            | <u>Operating Grants to<br/>Ontario Universities</u> | <u>Total Provincial<br/>Budgetary Expenditures</u> | <u>Universities<br/>Difference from<br/>Provincial Annual<br/>Increase</u> |
|------------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------|
| 1977-78    | 8.4                                                 | 10.1                                               | (1.7)                                                                      |
| 1978-79    | 5.8                                                 | 7.8                                                | (2.0)                                                                      |
| 1979-80    | 5.1                                                 | 8.4                                                | (3.3)                                                                      |
| 1980-81    | 7.2                                                 | 9.7                                                | (2.5)                                                                      |
| 1981-82    | 10.2                                                | 16.7                                               | (6.5)                                                                      |
| 1982-83    | 12.1                                                | 14.5                                               | (2.4)                                                                      |
| 1983-84    | 7.5                                                 | 9.1                                                | (1.6)                                                                      |
| 1984-85    | 6.5                                                 | 7.6                                                | (1.1)                                                                      |
| 1985-86    | 5.1                                                 | 10.8                                               | (5.7)                                                                      |
| 1986-87    | 9.5                                                 | 9.8                                                | (0.3)                                                                      |
| 1987-88(e) | 6.2                                                 | 8.4*                                               | (2.2)                                                                      |
| 1988-89(e) | 7.5                                                 | 8.6*                                               | (1.1)                                                                      |
| Average    | 7.5                                                 | 10.1                                               | (2.6)                                                                      |

Source: Province of Ontario, Public Accounts, various years;  
1988 Ontario Budget

\*Estimates of total provincial budgetary expenditure increases have been consistently understated. This has resulted in consistently underestimating the differences between increases in grants to universities, which do not change during the fiscal year, and increases in total provincial budgetary expenditures.

Figure 3  
GROWTH OF ONTARIO GOVERNMENT EXPENDITURES AND GRANTS TO  
UNIVERSITIES RELATIVE TO THE GROWTH OF GDP  
1977-78 to 1988-89

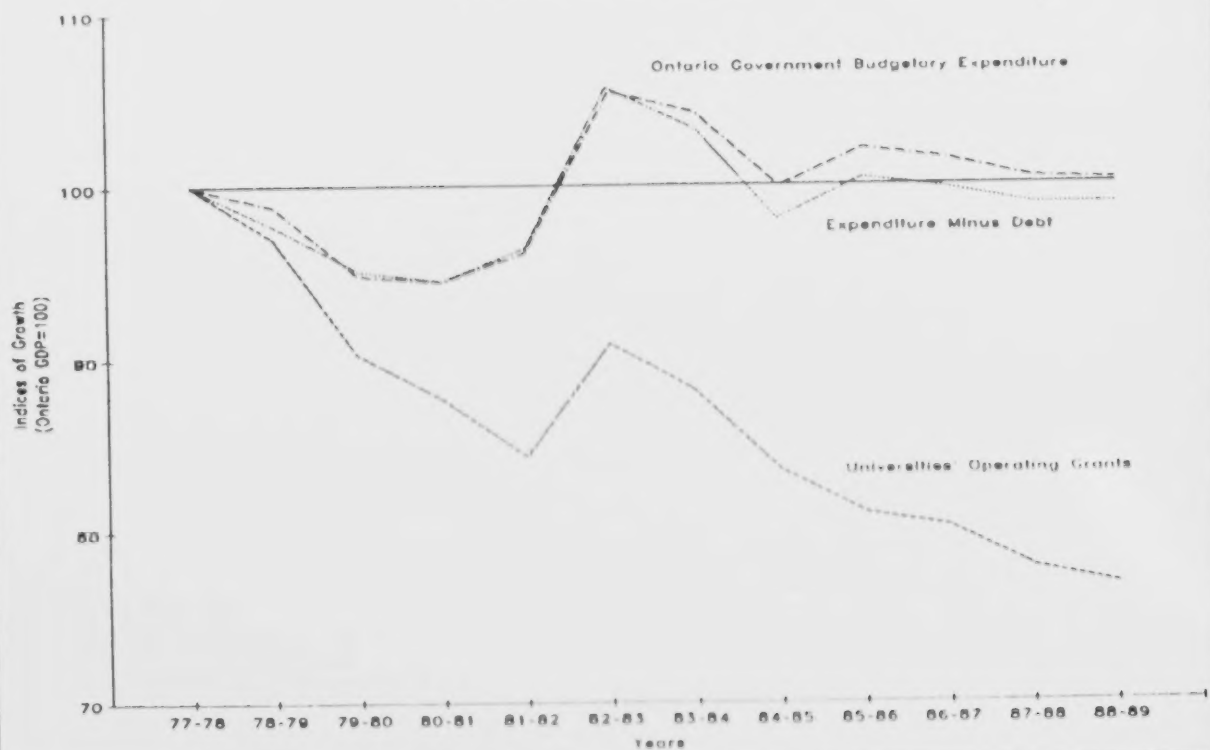


Table 3  
Growth of Ontario Government Expenditures  
And Grants to Universities Relative  
To The Growth of GDP

1977-78 to 1988-89

|         | <u>GDP</u><br><u>Index</u><br><u>Values</u> | <u>Government</u><br><u>Expenditures</u><br><u>Index</u> | <u>Government</u><br><u>Debt Interest</u><br><u>Index</u> | <u>Universities'</u><br><u>Grants</u><br><u>Index</u> | <u>Growth of</u><br><u>Government</u><br><u>vs.</u><br><u>GDP</u> | <u>Government Minus</u><br><u>Debt Interest</u><br><u>vs.</u><br><u>GDP</u> | <u>Growth of</u><br><u>Universities'</u><br><u>Grants vs.</u><br><u>GDP</u> |
|---------|---------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1977-78 | 100.0                                       | 100.0                                                    | 100.0                                                     | 100.0                                                 | 100.0                                                             | 100.0                                                                       | 100.0                                                                       |
| 1978-79 | 109.2                                       | 107.8                                                    | 106.7                                                     | 105.8                                                 | 98.8                                                              | 97.7                                                                        | 96.9                                                                        |
| 1979-80 | 123.3                                       | 116.9                                                    | 117.3                                                     | 111.1                                                 | 94.8                                                              | 95.1                                                                        | 90.2                                                                        |
| 1980-81 | 135.8                                       | 128.2                                                    | 128.2                                                     | 119.1                                                 | 94.4                                                              | 94.4                                                                        | 87.7                                                                        |
| 1981-82 | 155.7                                       | 149.7                                                    | 149.9                                                     | 131.3                                                 | 96.1                                                              | 96.3                                                                        | 84.3                                                                        |
| 1982-83 | 167.2                                       | 171.4                                                    | 171.6                                                     | 147.2                                                 | 105.7                                                             | 105.8                                                                       | 90.8                                                                        |
| 1983-84 | 179.5                                       | 187.0                                                    | 185.2                                                     | 158.2                                                 | 104.2                                                             | 103.2                                                                       | 88.1                                                                        |
| 1984-85 | 201.6                                       | 201.3                                                    | 197.8                                                     | 168.4                                                 | 99.9                                                              | 98.1                                                                        | 83.5                                                                        |
| 1985-86 | 218.5                                       | 223.1                                                    | 219.1                                                     | 176.9                                                 | 102.1                                                             | 100.3                                                                       | 81.0                                                                        |
| 1986-87 | 241.5                                       | 241.5                                                    | 240.9                                                     | 193.7                                                 | 101.5                                                             | 99.8                                                                        | 80.2                                                                        |
| 1987-88 | 264.5                                       | 265.7                                                    | 261.7                                                     | 205.7                                                 | 100.4                                                             | 98.9                                                                        | 77.8                                                                        |
| 1988-89 | 288.0                                       | 288.6                                                    | 284.4                                                     | 221.2                                                 | 100.2                                                             | 98.8                                                                        | 76.8                                                                        |

**Note:** The first four columns of information measure the growth of the economy (as measured by the Gross Domestic Product), the growth of provincial government expenditures, the growth of those same expenditures but excluding public debt interest payments, and the growth of operating grants to universities. The last three columns compare the rates of growth of government expenditures (including and excluding debt payments) and grants to universities with the rate of growth of the economy. That is, an index value of 100.0 indicates an identical growth rate to that of the GDP, a lesser value indicates a lower rate of growth, and a value greater than 100.0 indicates a growth rate greater than the growth rate of the GDP.

**Sources:** Public Accounts of Ontario, various years  
Ontario Budget, April 1988

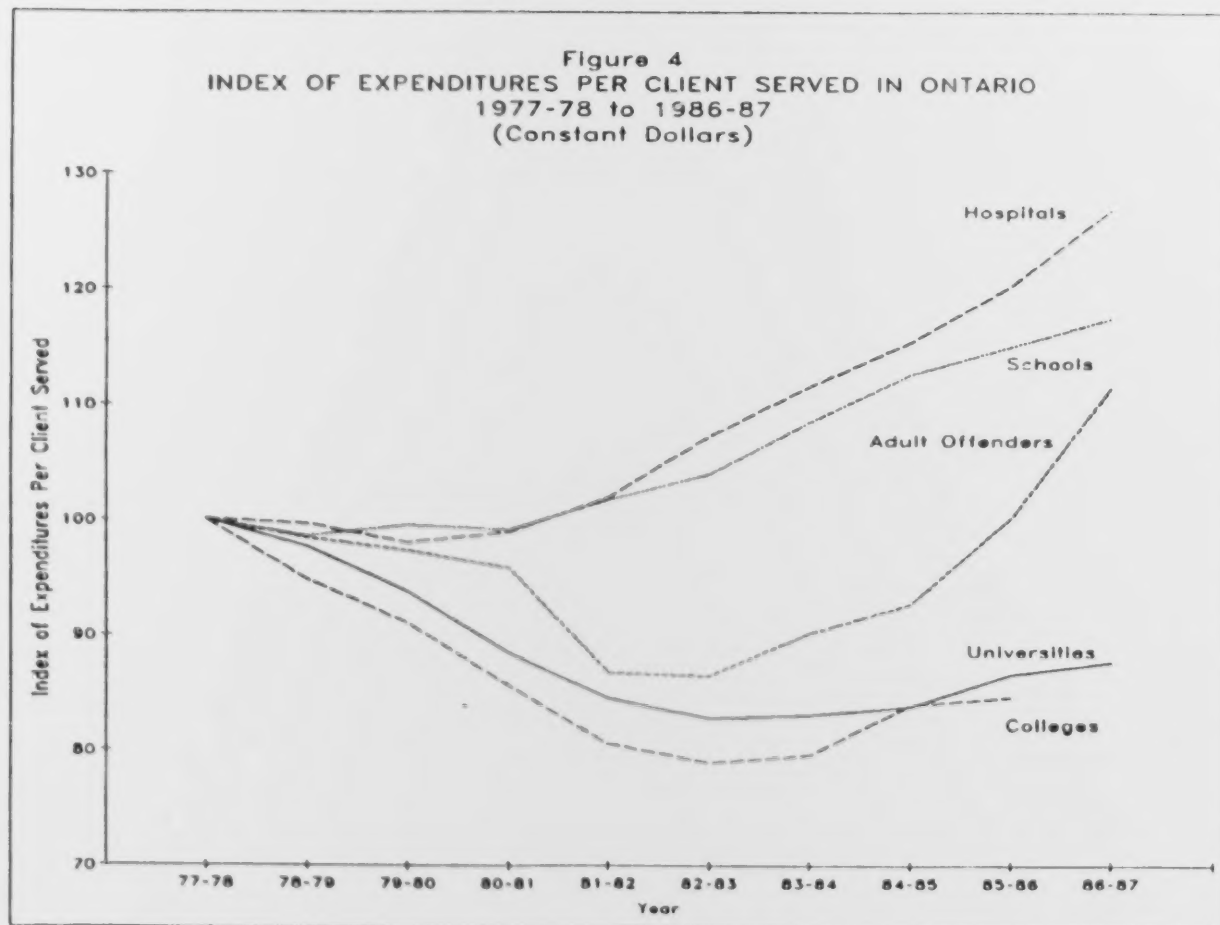


Table 4

## Expenditures per Client Served, 1977-78 to 1986-87

|                                                                              |          | 1977-78  | 1978-79  | 1979-80  | 1980-81  | 1981-82  | 1982-83  | 1983-84  | 1984-85  | 1985-86  | 1986-87  |
|------------------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Elementary & Secondary Education (total school costs per pupil) <sup>1</sup> | Actual   | \$2,083  | \$2,240  | \$2,468  | \$2,735  | \$3,149  | \$3,517  | \$3,859  | \$4,168  | \$4,432  | \$4,708  |
|                                                                              | Constant | 2,083    | 2,053    | 2,071    | 2,064    | 2,119    | 2,164    | 2,258    | 2,348    | 2,398    | 2,447    |
|                                                                              | Index    | 100.0    | 98.6     | 99.4     | 99.1     | 101.7    | 103.9    | 108.4    | 112.7    | 115.1    | 117.5    |
| Hospitals (gross operating costs per diem) <sup>2</sup>                      | Actual   | \$151.91 | \$165.06 | \$177.19 | \$199.15 | \$230.06 | \$264.67 | \$289.52 | \$311.06 | \$337.82 | \$370.80 |
|                                                                              | Constant | 151.91   | 151.29   | 148.65   | 150.30   | 154.82   | 162.87   | 169.41   | 175.25   | 182.80   | 192.72   |
|                                                                              | Index    | 100.0    | 99.6     | 97.9     | 98.9     | 101.9    | 107.2    | 111.5    | 115.4    | 120.3    | 126.9    |
| CAATs (operating cost per FTE student) <sup>3</sup>                          | Actual   | \$3,558  | \$3,679  | \$3,857  | \$4,035  | \$4,261  | \$4,567  | \$4,840  | \$5,300  | \$5,565  |          |
|                                                                              | Constant | 3,558    | 3,372    | 3,236    | 3,045    | 2,867    | 2,810    | 2,832    | 2,986    | 3,011    |          |
|                                                                              | Index    | 100.0    | 94.8     | 91.0     | 85.6     | 80.6     | 79.0     | 79.6     | 83.9     | 84.6     |          |
| Adult Offenders (expenditure per inmate day) <sup>4</sup>                    | Actual   | \$47.50  | \$50.97  | \$55.09  | \$60.32  | \$61.22  | \$66.80  | \$73.16  | \$78.17  | \$87.83  | \$101.89 |
|                                                                              | Constant | 47.50    | 46.72    | 46.22    | 45.52    | 41.20    | 41.11    | 42.81    | 44.04    | 47.51    | 52.96    |
|                                                                              | Index    | 100.0    | 98.4     | 97.3     | 95.8     | 86.7     | 86.5     | 90.1     | 92.7     | 100.1    | 111.5    |
| Universities (operating expense per FTE student) <sup>5</sup>                | Actual   | \$4,723  | \$5,030  | \$5,277  | \$5,534  | \$5,929  | \$6,354  | \$6,697  | \$7,021  | \$7,557  | \$7,963  |
|                                                                              | Constant | 4,723    | 4,610    | 4,427    | 4,176    | 3,990    | 3,910    | 3,918    | 3,956    | 4,089    | 4,139    |
|                                                                              | Index    | 100.0    | 97.6     | 93.7     | 88.4     | 84.5     | 82.8     | 83.0     | 83.8     | 86.6     | 87.6     |

p = preliminary

- Sources: 1. Ministry of Education.  
 2. Ministry of Health, Hospital Statistics, various years  
 3. Ministry of Colleges and Universities, Multi-Year Plan Analysis of the Colleges of Applied Arts and Technology, various years  
 4. Ministry of Correctional Services.  
 5. Ministry of Colleges and Universities, MCU Financial Report, various years; COU Special Committee on Macro-Indicators Ontario Universities Statistical Compendium, various years; and Committee of Finance Officers - Universities of Ontario, Financial Report of Ontario Universities, various years.

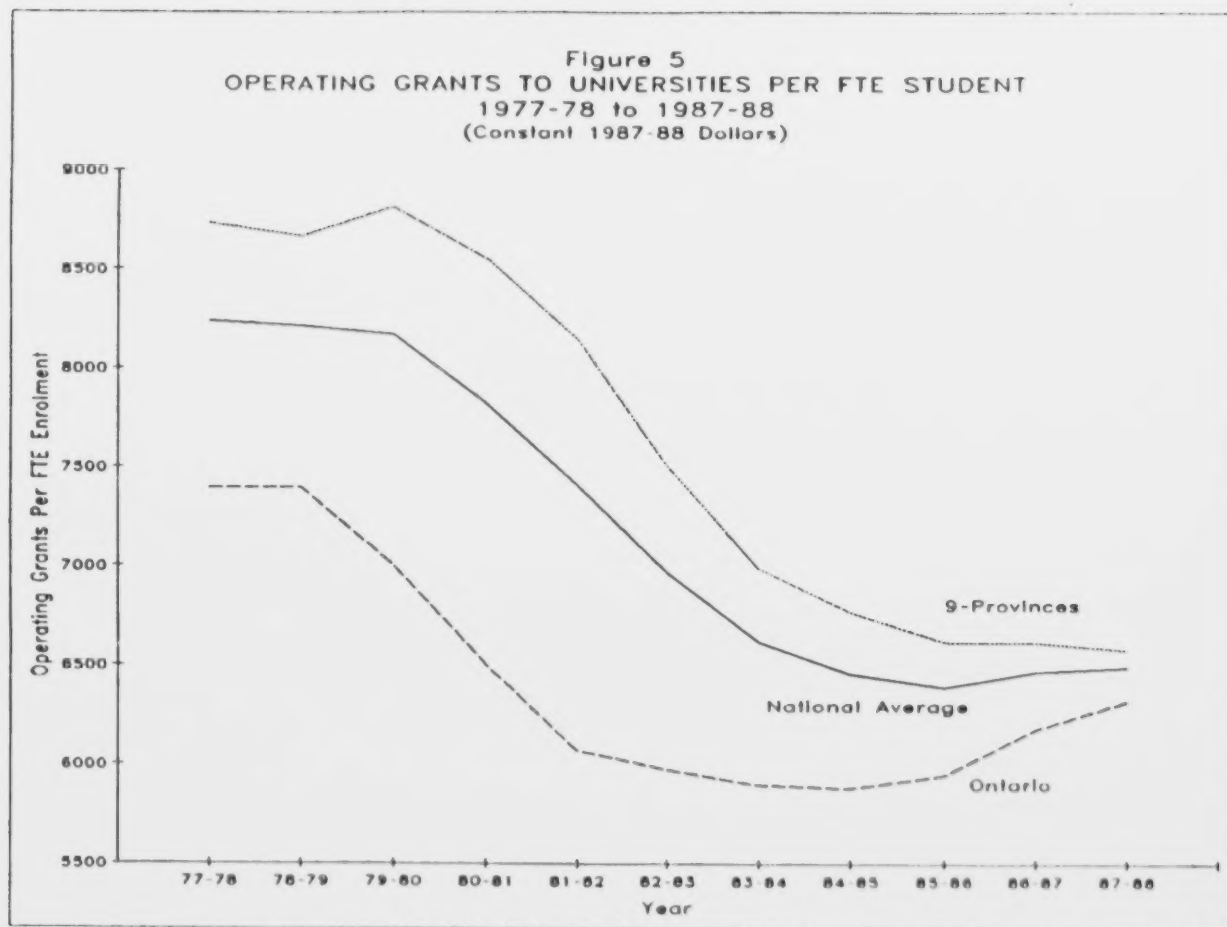


**Table 5**  
**Interprovincial Comparisons of Operating Grants to Universities**

|                       | Per FTE Student 1977-78 to 1987-88 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------------------|------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                       | 1977-78                            | 1978-79          | 1979-80          | 1980-81          | 1981-82          | 1982-83          | 1983-84          | 1984-85          | 1985-86e         | 1986-87e         | 1987-88e         |
| British Columbia      | \$4,419 (4)                        | \$4,915 (3)      | \$5,212 (4)      | \$5,538 (4)      | \$6,229 (2)      | \$6,205 (3)      | \$5,886 (4)      | \$5,865 (4)      | \$5,653 (6)      | \$5,871 (7)      | \$6,193 (8)      |
| Alberta               | 4,797 (1)                          | 5,340 (2)        | 5,815 (2)        | 6,284 (1)        | 6,812 (1)        | 7,328 (1)        | 7,182 (2)        | 7,089 (1)        | 7,039 (1)        | 7,154 (1)        | 6,821 (2)        |
| Saskatchewan          | 4,108 (5)                          | 4,616 (5)        | 5,098 (5)        | 5,304 (5)        | 5,619 (4)        | 6,149 (4)        | 6,075 (3)        | 6,237 (3)        | 6,861 (2)        | 6,802 (3)        | 6,500 (5)        |
| Manitoba              | 3,874 (7)                          | 4,124 (7)        | 4,771 (6)        | 4,499 (7)        | 5,062 (6)        | 5,362 (6)        | 5,582 (6)        | 5,705 (6)        | 5,887 (5)        | 6,237 (5)        | 6,625 (4)        |
| Quebec                | 4,449 (3)                          | 4,657 (4)        | 5,299 (3)        | 5,935 (2)        | 6,176 (3)        | 5,915 (5)        | 5,713 (5)        | 5,729 (5)        | 5,934 (4)        | 6,261 (4)        | 6,709 (3)        |
| New Brunswick         | 3,905 (6)                          | 4,364 (6)        | 4,762 (7)        | 4,929 (6)        | 4,998 (7)        | 5,270 (7)        | 5,175 (7)        | 5,495 (7)        | 5,618 (7)        | 5,840 (8)        | 6,212 (7)        |
| Nova Scotia           | 3,497 (9)                          | 3,819 (9)        | 4,074(10)        | 4,379 (9)        | 4,908 (8)        | 5,079 (8)        | 5,154 (8)        | 5,360 (8)        | 5,469 (8)        | 5,618 (9)        | 5,950 (9)        |
| Prince Edward Island  | 3,030(10)                          | 3,544(10)        | 4,246 (8)        | 4,441 (8)        | 4,720 (9)        | 5,023 (9)        | 5,089 (9)        | 5,283 (9)        | 5,319(10)        | 5,384(10)        | 5,276(10)        |
| Newfoundland          | 4,625 (2)                          | 5,485 (1)        | 5,994 (1)        | 5,684 (3)        | 5,847 (4)        | 6,912 (2)        | 7,788 (1)        | 6,994 (2)        | 6,696 (3)        | 7,037 (2)        | 7,064 (1)        |
| 9 Provinces           | 4,332 -                            | 4,688 -          | 5,213 -          | 5,623 -          | 6,007 -          | 6,050 -          | 5,935 -          | 5,961 -          | 6,073 -          | 6,325 -          | 6,573            |
| <b>Ontario (Rank)</b> | <b>3,669 (8)</b>                   | <b>4,002 (8)</b> | <b>4,140 (9)</b> | <b>4,273(10)</b> | <b>4,475(10)</b> | <b>4,821(10)</b> | <b>5,000(10)</b> | <b>5,180(10)</b> | <b>5,452 (9)</b> | <b>5,902 (6)</b> | <b>6,315 (6)</b> |
| Canada                | \$4,087 -                          | \$4,444 -        | \$4,828 -        | \$5,141 -        | \$5,461 -        | \$5,620 -        | \$5,610 -        | \$5,690 -        | \$5,862 -        | \$6,183 -        | \$6,486          |

e = estimate

Source: Tripartite Committee on Interprovincial Comparisons  
 November 1987, for actual data.  
 COU Research Division for estimates.

Table 6  
Provincial Operating Grants for Universities  
Per \$1,000 of Provincial Personal Income

|                      | <u>1977-78</u> | <u>1978-79</u> | <u>1979-80</u> | <u>1980-81</u> | <u>1981-82</u> | <u>1982-83</u> | <u>1983-84</u> | <u>1984-85</u> | <u>1985-86e</u> | <u>Rank<br/>1985-86</u> |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-------------------------|
| British Columbia     | \$ 10.45       | \$ 10.33       | \$ 9.68        | \$ 9.17        | \$ 9.09        | \$ 8.95        | \$ 8.43        | \$ 7.76        | \$ 6.67         | (10)                    |
| Alberta              | 13.97          | 13.10          | 11.87          | 10.90          | 10.26          | 11.04          | 11.26          | 11.34          | 10.56           | (6)                     |
| Saskatchewan         | 12.09          | 11.83          | 11.30          | 10.74          | 9.16           | 10.05          | 10.23          | 10.26          | 10.23           | (7)                     |
| Manitoba             | 13.00          | 11.79          | 12.12          | 11.13          | 10.49          | 11.14          | 11.75          | 10.86          | 10.14           | (8)                     |
| Quebec               | 13.87          | 14.12          | 14.44          | 14.87          | 13.98          | 12.95          | 12.49          | 12.17          | 11.76           | (4)                     |
| New Brunswick        | 14.12          | 13.90          | 13.41          | 13.31          | 13.01          | 13.25          | 12.78          | 12.54          | 11.80           | (3)                     |
| Nova Scotia          | 15.76          | 15.14          | 14.24          | 14.39          | 14.26          | 14.24          | 14.15          | 13.79          | 13.01           | (1)                     |
| Prince Edward Island | 12.76          | 11.68          | 12.22          | 11.38          | 11.23          | 11.49          | 10.83          | 11.01          | 10.69           | (5)                     |
| Newfoundland         | 15.26          | 15.24          | 15.21          | 14.85          | 14.33          | 14.16          | 13.77          | 13.24          | 12.87           | (2)                     |
| 9 Provinces          | 13.18          | 12.99          | 12.72          | 12.52          | 11.83          | 11.63          | 11.40          | 11.09          | 10.47           | -                       |
| Ontario<br>(Rank)    | 10.01<br>(10)  | 9.47<br>(10)   | 8.87<br>(10)   | 8.44<br>(10)   | 7.94<br>(10)   | 8.18<br>(10)   | 8.05<br>(10)   | 7.89<br>(9)    | 7.44<br>-       | -<br>(9)                |
| Canada               | 11.93          | 11.61          | 11.22          | 10.95          | 10.35          | 10.31          | 10.10          | 9.83           | 9.28            | -                       |

e = estimate

Source: Tripartite Committee on Interprovincial Comparisons, November 1987, for actual data. COU Research Division for estimates.

Table 7  
Interprovincial Comparisons of University Financing  
1984-85

| <u>Indicators</u>                                                 | <u>Ontario</u> | <u>Rank</u> | <u>Average<br/>Of Rest<br/>Of Canada</u> | <u>Additional Funding Required<br/>To Equal Rest Of Canada</u> |                                     |
|-------------------------------------------------------------------|----------------|-------------|------------------------------------------|----------------------------------------------------------------|-------------------------------------|
|                                                                   |                |             |                                          | <u>Total Required<br/>(\$ millions)</u>                        | <u>Total Per<br/>Student<br/>\$</u> |
| 1) GRANTS<br>PER STUDENT                                          | \$ 5,180       | (10)        | \$ 5,961                                 | \$ 168.9                                                       | \$ 782                              |
| 2) GRANTS<br>PER CAPITA                                           | \$ 124         | (8)         | \$ 150                                   | \$ 236.8                                                       | \$ 1,096                            |
| 3) GRANTS + STUDENT<br>AID PER CAPITA                             | \$ 131         | (8)         | \$ 162                                   | \$ 283.9                                                       | \$ 1,114                            |
| 4) GRANTS + FEES<br>PER STUDENT                                   | \$ 6,574       | (7)         | \$ 6,762                                 | \$ 40.7                                                        | 189                                 |
| 5) TOTAL OPERATING<br>INCOME PER STUDENT                          | \$ 6,827       | (7)         | \$ 7,264                                 | \$ 94.5                                                        | 437                                 |
| 6) GRANTS + STUDENT<br>AID AS A % OF GROSS<br>GENERAL EXPENDITURE | 4.18%          | (2)         | 3.79%                                    | \$-110.1                                                       | -510                                |
| 7) GRANTS PER \$1,000<br>OF PERSONAL INCOME                       | \$ 7.89        | (9)         | \$ 11.09                                 | \$ 453.5                                                       | \$ 2,099                            |
| 8) OPERATING EXPENDITURES<br>AS A % OF GROSS<br>DOMESTIC PRODUCT  | 0.88%          | (8)         | 1.12%                                    | \$ 402.6                                                       | \$ 1,864                            |

Source: Tripartite Committee on Interprovincial Comparisons, November 1987.

Table 8  
Interprovincial Comparisons of Total Operating Expenses  
Per Client

|                  | <u>HOSPITALS</u>                                      |      | <u>SCHOOLS</u>                                   |      | <u>UNIVERSITIES</u>                                    |      |
|------------------|-------------------------------------------------------|------|--------------------------------------------------|------|--------------------------------------------------------|------|
|                  | Total Operating Expense<br>Per Patient Day<br>1985-86 |      | School Board Expenditures<br>Per Student<br>1984 |      | Total Operating Expenditures<br>Per Student<br>1984-85 |      |
|                  | \$                                                    | RANK | \$                                               | RANK | \$                                                     | RANK |
| British Columbia | 249.12                                                | (9)  | 3,956                                            | (6)  | 7,097                                                  | (5)  |
| Alberta          | 311.76                                                | (5)  | 4,249                                            | (2)  | 8,849                                                  | (1)  |
| Saskatchewan     | 266.16                                                | (7)  | 4,065                                            | (4)  | 7,839                                                  | (3)  |
| Manitoba         | 357.31                                                | (2)  | 3,994                                            | (5)  | 6,893                                                  | (7)  |
| Ontario          | 334.23                                                | (4)  | 4,091                                            | (3)  | 6,801                                                  | (9)  |
| Quebec           | 249.97                                                | (8)  | 5,024                                            | (1)  | 6,914                                                  | (6)  |
| New Brunswick    | 275.00                                                | (6)  | 3,344                                            | (8)  | 6,884                                                  | (8)  |
| P.E.I.           | 248.25                                                | (10) | 2,985                                            | (9)  | 6,152                                                  | (10) |
| Nova Scotia      | 368.42                                                | (1)  | 3,392                                            | (7)  | 7,398                                                  | (4)  |
| Newfoundland     | 347.25                                                | (3)  | 2,957                                            | (10) | 8,283                                                  | (2)  |

SOURCE: Statistics Canada, Hospital Statistics - Preliminary Annual Report.  
Statistics Canada, Financial Statistics of Education.  
Tripartite Committee on Interprovincial Comparisons, November 1987.

\*Preliminary

Figure 6  
GROWTH OF GRANTS TO UNIVERSITIES RELATIVE TO GDP  
1977-78 to 1986-87

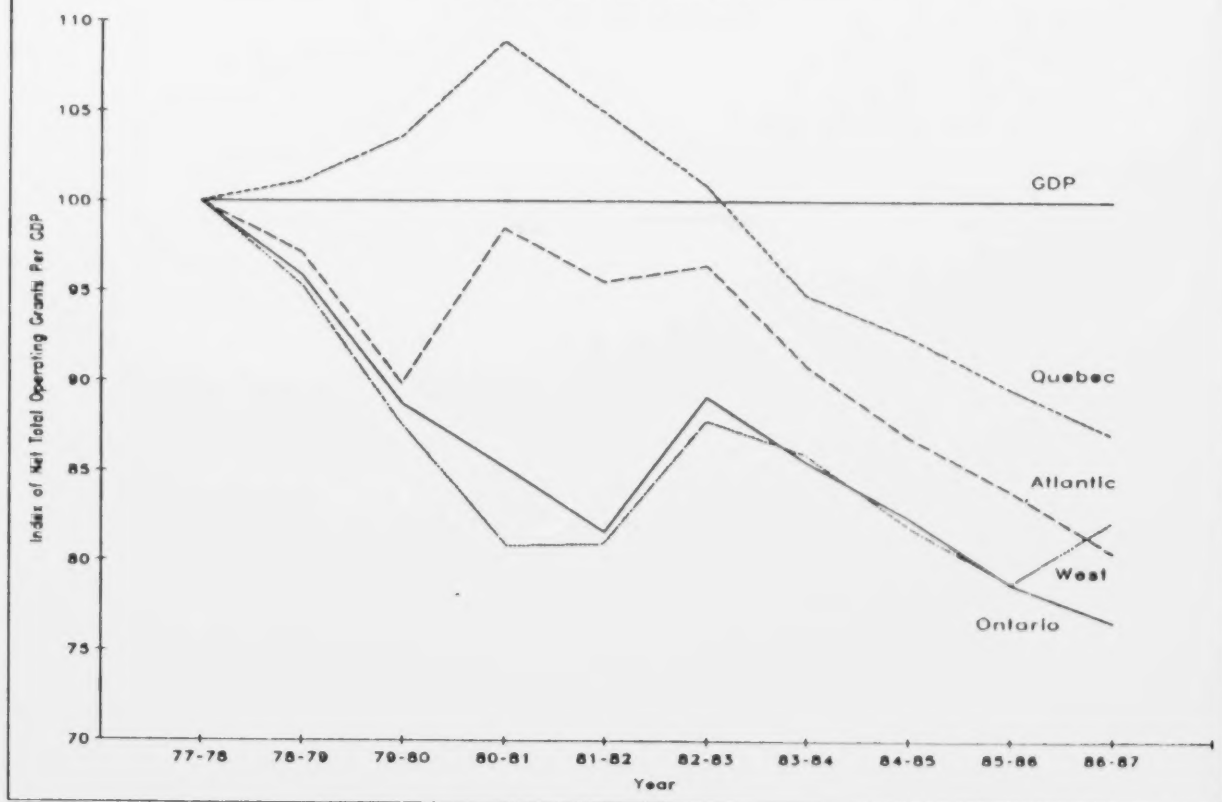


Table 9

## GDP Elasticity By Province, 1977-78 to 1986-87

(Growth Rates of Provincial Operating Grants  
to Universities as a Ratio of GDP Growth)

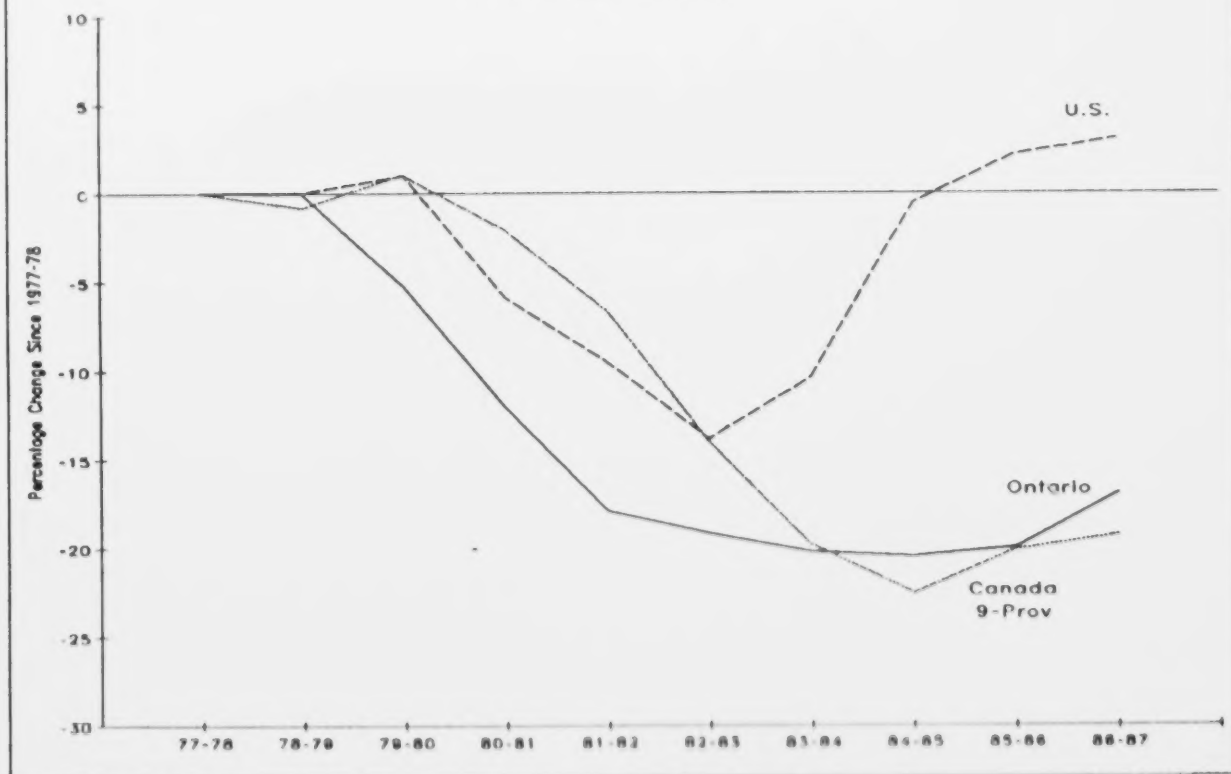
|                      | 1977-78 to<br>1981-82 | 1981-82 to<br>1986-87 | 1977-78 to<br>1986-87 | Rank |
|----------------------|-----------------------|-----------------------|-----------------------|------|
| British Columbia     | 0.732                 | 0.012                 | 0.426                 | (10) |
| Alberta              | 0.496                 | 1.800                 | 0.853                 | (2)  |
| Saskatchewan         | 0.532                 | 2.531                 | 0.983                 | (1)  |
| Manitoba             | 0.526                 | 0.762                 | 0.657                 | (6)  |
| Quebec               | 1.133                 | 0.506                 | 0.774                 | (3)  |
| New Brunswick        | 0.913                 | 0.564                 | 0.674                 | (5)  |
| Nova Scotia          | 0.940                 | 0.511                 | 0.644                 | (7)  |
| Prince Edward Island | 0.621                 | 0.651                 | 0.638                 | (8)  |
| Newfoundland         | 0.773                 | 0.703                 | 0.734                 | (4)  |
| 9 - Provinces        | 0.790                 | 0.661                 | 0.728                 | --   |
| Ontario              | 0.500                 | 0.676                 | 0.606                 | (9)  |
| Canada               | 0.713                 | 0.653                 | 0.681                 | --   |

Note: In this table, "elasticity" refers to the growth of operating grants to universities relative to the growth of the economy. The table demonstrates that as the economy, stated in terms of Gross Domestic Product, expands or contracts, then operating grants to universities will expand or contract at a ratio greater or lesser than 1.00. That is, if provincial grants to universities are increasing at a faster rate than the GDP, this table will reflect elasticities greater than 1.00.

Sources: Statistics Canada

Tripartite Committee on Interprovincial Comparisons

Figure 7  
GROWTH IN STATE & PROVINCIAL GRANTS PER FTE ENROLMENT  
1977-78 to 1986-87  
(Constant Dollars)



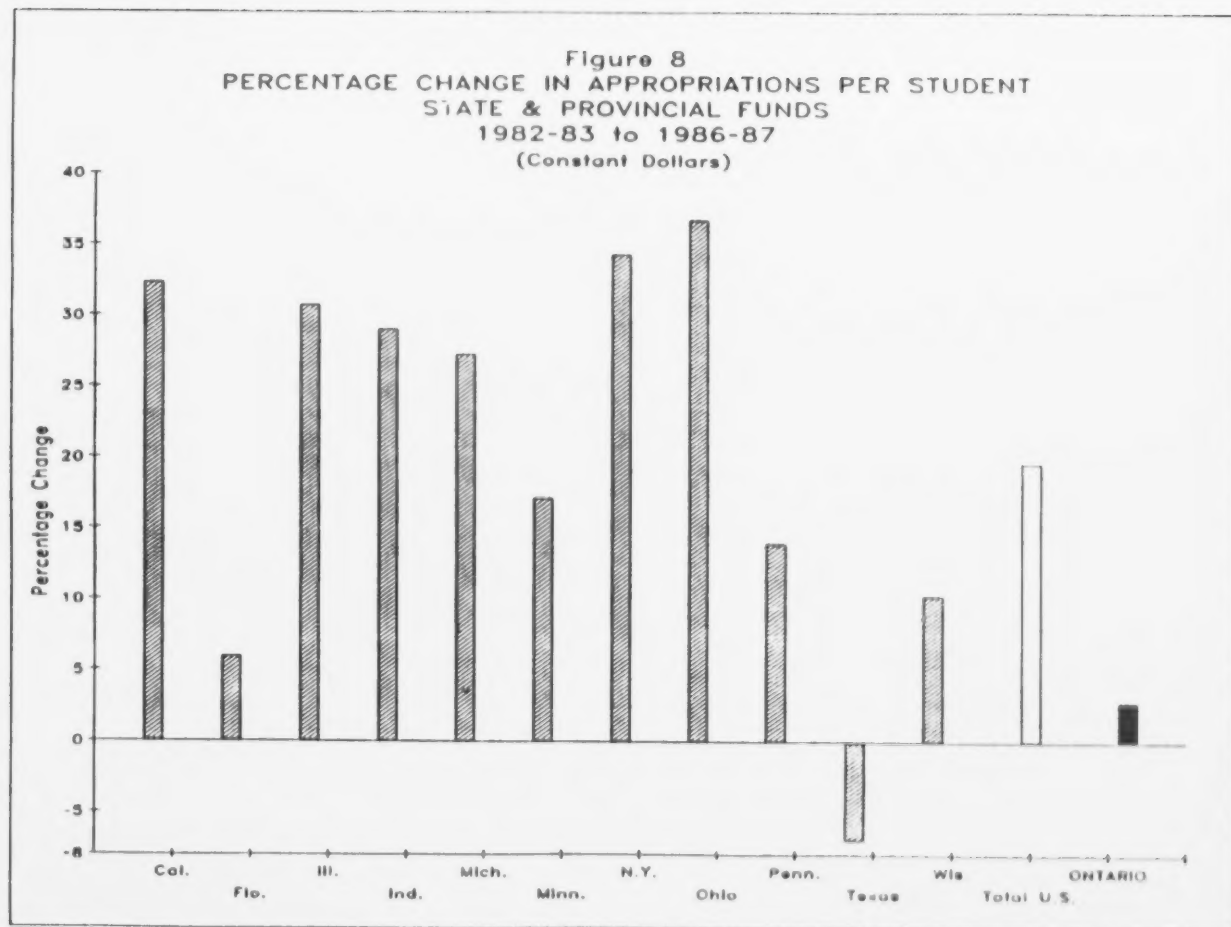


Table 10

STATE/LOCAL AND PROVINCIAL/LOCAL EXPENDITURES

PER CAPITA ON HIGHER EDUCATION, 1983 - 84

(\$U.S. per capita)

| <u>Canada</u>    |          | <u>United States</u> |          |
|------------------|----------|----------------------|----------|
| British Columbia | \$173.65 | California           | \$247.49 |
| Alberta          | 266.55   | Florida              | 140.63   |
| Saskatchewan     | 104.40   | Illinois             | 178.64   |
| Manitoba         | 152.00   | Indiana              | 211.44   |
| Ontario          | 152.76   | Michigan             | 241.19   |
| Quebec           | 211.46   | Minnesota            | 248.05   |
| New Brunswick    | 164.99   | New York             | 167.04   |
| P.E.I.           | 129.45   | Ohio                 | 185.27   |
| Nova Scotia      | 137.64   | Pennsylvania         | 100.98   |
| Newfoundland     | 149.85   | Texas                | 236.35   |
|                  |          | Wisconsin            | 300.10   |
| 10 provinces     | 178.60   | Total United States  | 202.45   |

Source: Statistics Canada, Consolidated Government Financing, 68-202, December 1987.  
 National Center for Higher Education Management Studies, Higher Education Financing in Fifty States, Interstate Comparisons, Fiscal Year 1984, August 1986.

Figure 9  
REVENUE PER FULL-TIME ENROLMENT AT  
ONTARIO, U.S. PUBLIC AND U.S. PRIVATE DOCTORAL INSTITUTIONS  
(U.S. \$ 1985-86)

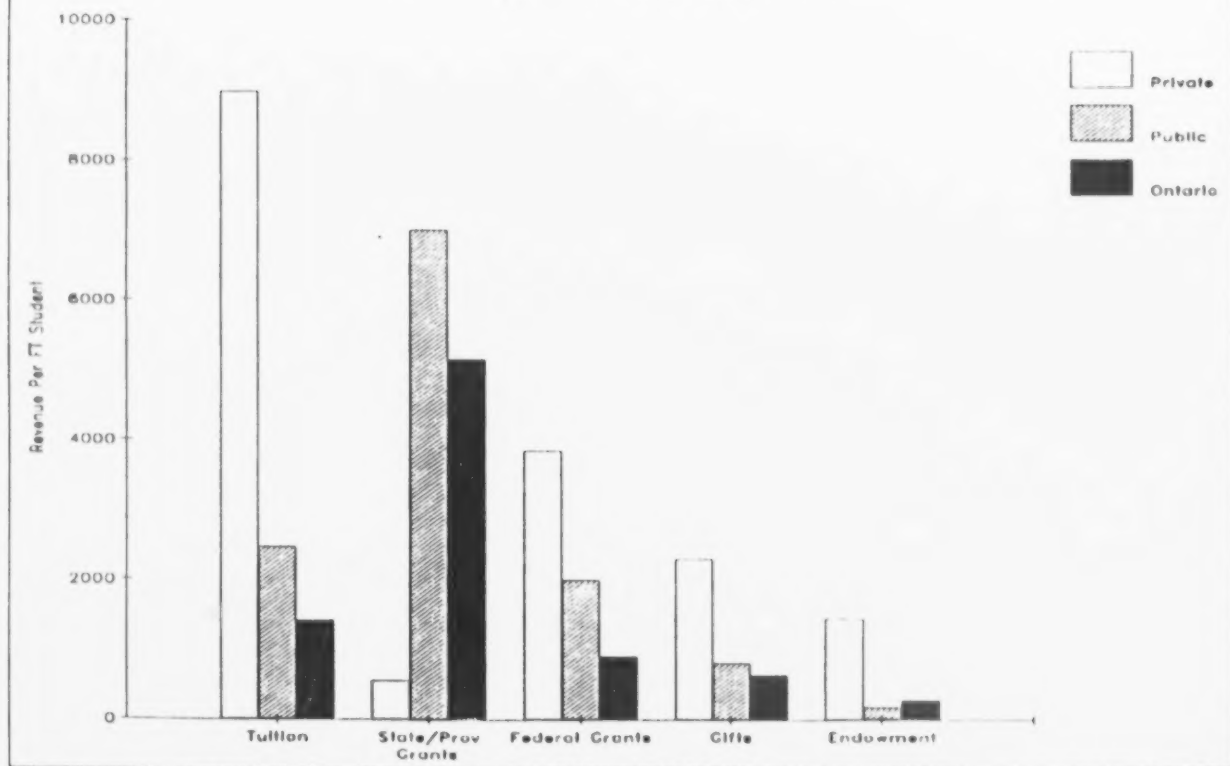


Table 11

Revenue Per Full-time Enrolment At  
Doctoral Level Universities, 1985-86

(S.U.S.)

|                  | <u>United States</u> |               |                |
|------------------|----------------------|---------------|----------------|
|                  | <u>Private</u>       | <u>Public</u> | <u>Ontario</u> |
| Tuition & Fees   |                      |               |                |
| Per F.T. Student | \$8,984              | \$2,465       | \$1,428        |
| State/Provincial |                      |               |                |
| Appropriations   |                      |               |                |
| Per F.T. Student | 561                  | 7,006         | 5,164          |
| Federal Grants   |                      |               |                |
| Per F.T. Student | 3,852                | 2,009         | 917            |
| Gifts Per        |                      |               |                |
| F.T. Student     | 2,315                | 825           | 656            |
| Endowment Income |                      |               |                |
| Per F.T. Student | 1,467                | 187           | 295            |

Source: National Center for Higher Education Management Studies,  
Financial Statistics.  
Council of Finance Officers - Universities of Ontario,  
Financial Report of Ontario Universities 1985-86.

Table 12

Percentage of Universities' General Operating Income, 1986-87

|                      | Provincial Government Grants |      | Tuition Fees Credit Courses |      | Other Operating Income |      | Total Operating Income |
|----------------------|------------------------------|------|-----------------------------|------|------------------------|------|------------------------|
|                      | %                            | Rank | %                           | Rank | %                      | Rank | %                      |
| British Columbia     | 79.9                         | (7)  | 15.6                        | (5)  | 4.5                    | (6)  | 100.0                  |
| Alberta              | 85.8                         | (2)  | 10.1                        | (9)  | 4.1                    | (8)  | 100.0                  |
| Saskatchewan         | 80.2                         | (6)  | 13.9                        | (6)  | 5.9                    | (1)  | 100.0                  |
| Manitoba             | 82.3                         | (3)  | 13.4                        | (7)  | 4.3                    | (7)  | 100.0                  |
| Quebec               | 88.1                         | (1)  | 6.3                         | (10) | 5.6                    | (3)  | 100.0                  |
| New Brunswick        | 76.7                         | (8)  | 20.1                        | (1)  | 3.2                    | (9)  | 100.0                  |
| Prince Edward Island | 82.3                         | (5)  | 16.2                        | (4)  | 1.5                    | (10) | 100.0                  |
| Nova Scotia          | 76.3                         | (10) | 19.0                        | (2)  | 4.7                    | (4)  | 100.0                  |
| Newfoundland         | 82.3                         | (4)  | 13.1                        | (8)  | 4.6                    | (5)  | 100.0                  |
| 9 Provinces          | 84.0                         | -    | 11.1                        | -    | 4.9                    | -    | 100.0                  |
| Ontario              | 76.5                         | (9)  | 17.6                        | (3)  | 5.9                    | (2)  | 100.0                  |
| Canada               | 81.1                         | -    | 13.7                        | -    | 5.2                    | -    | 100.0                  |

Source: Canadian Association of University Business Officers,  
Financial Statistics of Universities and Colleges 1986-87

Table 13

Percentage of Universities' Total Income Excluding Ancillary Enterprises, 1986-87

|                      | <u>Provincial Government<br/>Grants</u> |             | <u>Total<br/>Fees</u> |             | <u>Other Income</u> |             | <u>Total Income</u> |
|----------------------|-----------------------------------------|-------------|-----------------------|-------------|---------------------|-------------|---------------------|
|                      | <u>£</u>                                | <u>Rank</u> | <u>£</u>              | <u>Rank</u> | <u>£</u>            | <u>Rank</u> | <u>£</u>            |
| British Columbia     | 63.9                                    | (7)         | 13.3                  | (4)         | 22.8                | (4)         | 100.0               |
| Alberta              | 74.6                                    | (3)         | 8.2                   | (8)         | 17.1                | (7)         | 100.0               |
| Saskatchewan         | 71.7                                    | (4)         | 10.7                  | (7)         | 17.6                | (8)         | 100.0               |
| Manitoba             | 68.1                                    | (6)         | 11.2                  | (6)         | 20.8                | (5)         | 100.0               |
| Quebec               | 75.3                                    | (2)         | 6.8                   | (9)         | 17.9                | (6)         | 100.0               |
| New Brunswick        | 63.4                                    | (9)         | 16.5                  | (1)         | 20.1                | (2)         | 100.0               |
| Prince Edward Island | 92.3                                    | (1)         | 5.7                   | (10)        | 2.1                 | (10)        | 100.0               |
| Nova Scotia          | 56.8                                    | (10)        | 16.3                  | (2)         | 26.9                | (1)         | 100.0               |
| Newfoundland         | 71.1                                    | (5)         | 11.6                  | (5)         | 17.3                | (9)         | 100.0               |
| 9 Provinces          | 71.2                                    |             | 9.7                   |             | 19.1                |             | 100.0               |
| Ontario              | 63.5                                    | (8)         | 15.2                  | (3)         | 21.3                | (3)         | 100.0               |
| Canada               | 68.3                                    |             | 11.8                  |             | 19.9                |             | 100.0               |

Source: Canadian Association of University Business Officers,  
Financial Statistics of Universities and Colleges 1986-87

Table 14  
Costs of Sponsored Research and the Operating Base  
1977-78 to 1986-87

|         | <u>Sponsored Research Expenses</u> |                                       | <u>Operating Expenses</u>         |                                       |
|---------|------------------------------------|---------------------------------------|-----------------------------------|---------------------------------------|
|         | <u>Constant Dollars (1977-78)</u>  | <u>Percentage Growth from 1977-78</u> | <u>Constant Dollars (1977-78)</u> | <u>Percentage Growth from 1977-78</u> |
| 1977-78 | \$125,627                          | -                                     | \$868,333                         | -                                     |
| 1978-79 | 132,467                            | +5.4%                                 | 836,029                           | -3.7%                                 |
| 1979-80 | 136,324                            | +8.5                                  | 808,743                           | -6.9                                  |
| 1980-81 | 141,121                            | +12.3                                 | 788,029                           | -9.2                                  |
| 1981-82 | 154,541                            | +23.0                                 | 789,501                           | -9.1                                  |
| 1982-83 | 170,811                            | +16.0                                 | 816,350                           | -6.0                                  |
| 1983-84 | 173,837                            | +38.4                                 | 845,071                           | -2.7                                  |
| 1984-85 | 185,749                            | +47.9                                 | 856,170                           | -1.4                                  |
| 1985-86 | 188,484                            | +50.0                                 | 877,249                           | +1.0                                  |
| 1986-87 | 187,276                            | +49.1                                 | 890,012                           | +2.5                                  |

Source: COFO-UO, Financial Report of Ontario Universities, various years.

Table 15  
Salaries and Wages, Ontario Universities, 1977-78 to 1986-87  
(1977-78 \$ constant)

|                                       | 1977-78   | 1978-79   | 1979-80   | 1980-81   | 1981-82   | 1982-83   | 1983-84   | 1984-85   | 1985-86   | 1986-87   |
|---------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Academic Ranks</b>                 |           |           |           |           |           |           |           |           |           |           |
| Constant Dollars (\$000)              | \$340,465 | \$328,527 | \$317,209 | \$309,829 | \$309,579 | \$320,583 | \$325,807 | \$328,848 | \$334,356 | \$342,122 |
| Constant Dollars Per FTE Enrolment    | 100.0     | 96.3      | 92.4      | 87.2      | 83.1      | 81.5      | 80.3      | 80.6      | 82.6      | 84.2      |
| <b>Other Instruction and Research</b> |           |           |           |           |           |           |           |           |           |           |
| Constant Dollars (\$000)              | \$38,248  | \$35,519  | \$34,742  | \$34,451  | \$33,448  | \$33,441  | \$33,542  | \$33,806  | \$34,892  | \$35,109  |
| Constant Dollars Per FTE Enrolment    | 100.0     | 92.7      | 90.1      | 86.3      | 79.9      | 75.7      | 74.5      | 73.7      | 76.7      | 76.9      |
| <b>Non-Academic Staff</b>             |           |           |           |           |           |           |           |           |           |           |
| Constant Dollars (\$000)              | \$250,779 | \$240,317 | \$226,186 | \$218,856 | \$219,392 | \$226,513 | \$236,889 | \$240,495 | \$248,165 | \$250,697 |
| Constant Dollars Per FTE Enrolment    | 100.0     | 95.7      | 89.4      | 83.7      | 80.0      | 78.2      | 79.2      | 80.0      | 83.2      | 83.7      |
| <b>Total Salaries and Wages</b>       |           |           |           |           |           |           |           |           |           |           |
| Constant Dollars (\$000)              | \$629,492 | \$604,363 | \$578,137 | \$563,136 | \$562,419 | \$580,537 | \$596,238 | \$603,150 | \$617,413 | \$627,928 |
| Constant Dollars Per FTE Enrolment    | 100.0     | 95.9      | 91.1      | 85.7      | 81.7      | 79.9      | 79.4      | 79.9      | 82.5      | 83.6      |

Source: COFO-UO, Financial Report of Ontario Universities, various years.

Table 16  
Comparison of Benefit Costs

1977-78 to 1987-88

(\$000 Constant 1977-78 Dollars)

(excluding OCA, Algoma, Nipissing, Hearst)

|                                     | 1977-78       | 1978-79       | 1979-80       | 1980-81       | 1981-82       | 1982-83       | 1983-84       | 1984-85       | 1985-86       | 1986-87       | 1987-88e      |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <u>Statutory Benefits</u>           |               |               |               |               |               |               |               |               |               |               |               |
| O.H.I.P.                            | 5,821         | 6,098         | 5,423         | 4,646         | 4,736         | 5,368         | 5,316         | 5,469         | 5,355         | 5,265         | 5,218         |
| Canada Pension                      | 5,906         | 5,768         | 5,644         | 5,578         | 5,549         | 5,864         | 5,987         | 6,252         | 6,608         | 7,212         | 7,388         |
| Worker's Compensation               | 948           | 846           | 826           | 776           | 927           | 1,058         | 1,102         | 1,288         | 1,504         | 1,683         | 1,782         |
| Unemployment Insurance              | 7,250         | 6,605         | 5,504         | 6,356         | 7,649         | 8,831         | 11,307        | 11,843        | 12,431        | 12,770        | 13,276        |
| <b>Total Statutory Benefits</b>     | <b>19,925</b> | <b>19,318</b> | <b>17,397</b> | <b>17,356</b> | <b>18,861</b> | <b>21,120</b> | <b>23,712</b> | <b>24,851</b> | <b>25,898</b> | <b>26,930</b> | <b>27,664</b> |
| <u>Non-Statutory Benefits</u>       |               |               |               |               |               |               |               |               |               |               |               |
| Pension                             |               |               |               |               |               |               |               |               |               |               |               |
| - Current Service                   | 36,003        | 35,681        | 34,838        | 33,365        | 33,946        | 36,010        | 37,169        | 36,996        | 38,022        | 36,614        | 38,897        |
| - Experience Deficiency             | 1,513         | 1,660         | 415           | 138           | 262           | 260           | 188           | 174           | (103)         | (102)         | (108)         |
| - Past Service Liability            | 3,466         | 3,251         | 2,038         | 654           | 99            | 327           | 410           | 518           | 0             | 47            | 15            |
| Group Life Insurance                | 3,817         | 3,463         | 3,294         | 2,981         | 2,622         | 2,811         | 2,897         | 2,720         | 2,830         | 2,799         | 3,009         |
| Long Term Disability                | 1,805         | 1,874         | 1,843         | 2,292         | 2,179         | 2,439         | 2,709         | 2,654         | 2,758         | 2,762         | 2,922         |
| Dental Insurance                    | 1,222         | 1,939         | 1,925         | 2,245         | 2,920         | 3,310         | 3,437         | 3,757         | 4,287         | 4,714         | 5,180         |
| Extended Health Care                | 1,079         | 941           | 898           | 1,253         | 1,396         | 1,751         | 2,090         | 2,399         | 2,791         | 3,039         | 3,364         |
| Tuition Remission                   | 479           | 879           | 1,420         | 1,437         | 1,770         | 1,802         | 1,974         | 2,299         | 2,342         | 2,301         | 2,287         |
| Other                               | 485           | 434           | 518           | 495           | 654           | 618           | 435           | 244           | 680           | (1,700)       | 692           |
| <b>Total Non-Statutory Benefits</b> | <b>49,890</b> | <b>50,123</b> | <b>47,189</b> | <b>44,860</b> | <b>45,848</b> | <b>49,327</b> | <b>51,311</b> | <b>51,761</b> | <b>53,608</b> | <b>50,495</b> | <b>56,257</b> |
| <b>Total Benefits</b>               | <b>69,815</b> | <b>69,441</b> | <b>64,586</b> | <b>62,216</b> | <b>64,709</b> | <b>70,447</b> | <b>75,022</b> | <b>76,612</b> | <b>79,506</b> | <b>77,425</b> | <b>83,922</b> |

Figure 10  
 ONTARIO GOVERNMENT AND UNIVERSITIES'  
 CONTRIBUTORY BENEFITS AS A PERCENTAGE OF SALARIES  
 1977-78 to 1986-87

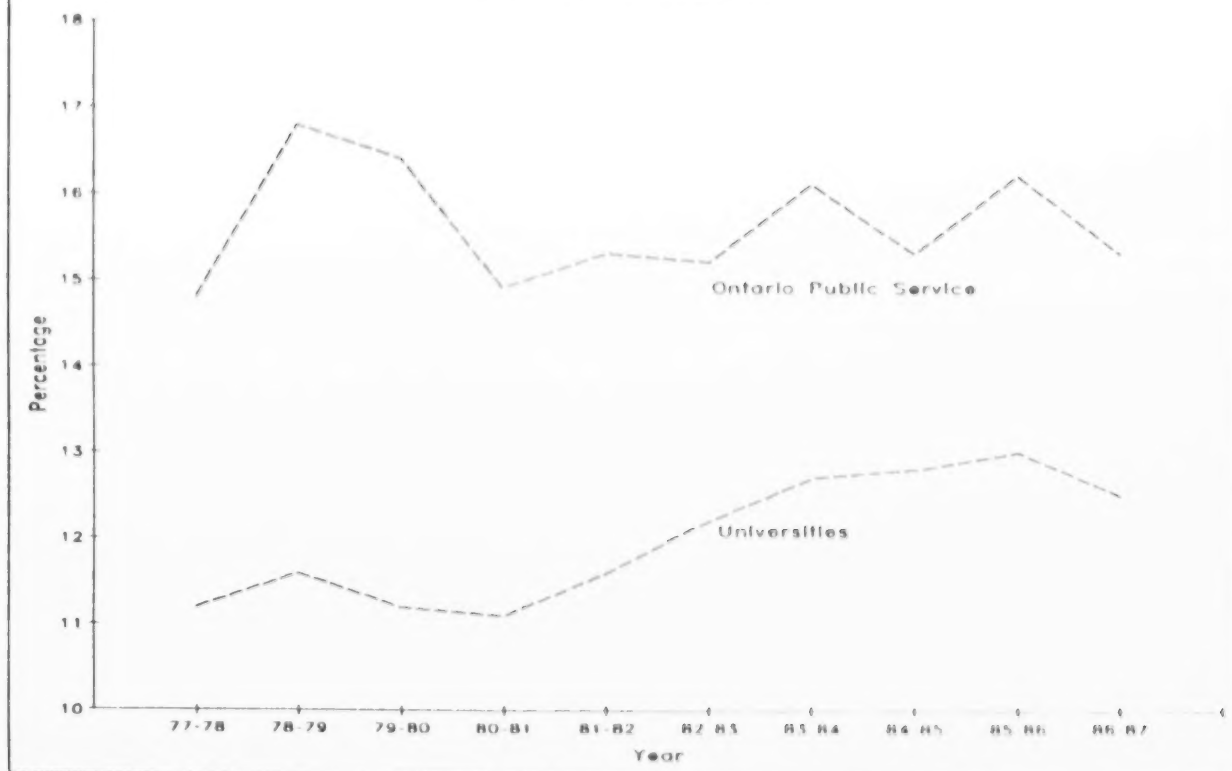


Table 17  
Ontario University Non Salary Price Index  
 (1986 revision: 1980-81 = 100)

| <u>Year</u>      | <u>OUNSPI</u> | <u>CPI</u> | <u>OUNSPI</u><br><u>Annual %</u><br><u>Increase</u> | <u>CPI</u><br><u>Annual %</u><br><u>Increase</u> |
|------------------|---------------|------------|-----------------------------------------------------|--------------------------------------------------|
| <u>Actual</u>    |               |            |                                                     |                                                  |
| 1970-71          | 37.8          | 44.7       | -                                                   | -                                                |
| 1971-72          | 39.5          | 46.4       | 4.4                                                 | 3.9                                              |
| 1972-73          | 40.8          | 48.8       | 3.4                                                 | 5.1                                              |
| 1973-74          | 45.4          | 53.1       | 11.2                                                | 8.9                                              |
| 1974-75          | 52.9          | 59.2       | 16.6                                                | 11.4                                             |
| 1975-76          | 58.6          | 65.1       | 10.9                                                | 10.0                                             |
| 1976-77          | 63.9          | 69.5       | 8.9                                                 | 6.8                                              |
| 1977-78          | 71.8          | 75.5       | 12.3                                                | 8.6                                              |
| 1978-79          | 78.8          | 82.4       | 9.9                                                 | 9.1                                              |
| 1979-80          | 89.1          | 90.0       | 13.1                                                | 9.2                                              |
| 1980-81          | 100.0         | 100.0      | 12.2                                                | 11.2                                             |
| 1981-82          | 113.9         | 112.2      | 13.9                                                | 12.2                                             |
| 1982-83          | 125.4         | 122.7      | 10.0                                                | 9.4                                              |
| 1983-84          | 131.0         | 129.0      | 4.5                                                 | 5.1                                              |
| 1984-85          | 139.4         | 134.0      | 6.4                                                 | 3.9                                              |
| 1985-86          | 146.9         | 139.5      | 5.4                                                 | 4.1                                              |
| 1986-87          | 150.2         | 145.3      | 2.2                                                 | 4.2                                              |
| <u>Estimated</u> |               |            |                                                     |                                                  |
| 1987-88          | 158.9         | 152.0      | 5.4                                                 | 4.6                                              |
| 1988-89          | 168.3         | 159.1      | 5.5                                                 | 4.7                                              |
| 1989-90          | 178.5         | 166.8      | 5.7                                                 | 4.8                                              |
| 1990-91          | 188.4         | 174.1      | 5.2                                                 | 4.4                                              |
| 1991-92          | 197.4         | 180.7      | 4.5                                                 | 3.8                                              |

Figure 11  
INDEX OF ANNUAL CHANGES IN THE  
OUNSPI AND CPI  
1977-78 to 1986-87

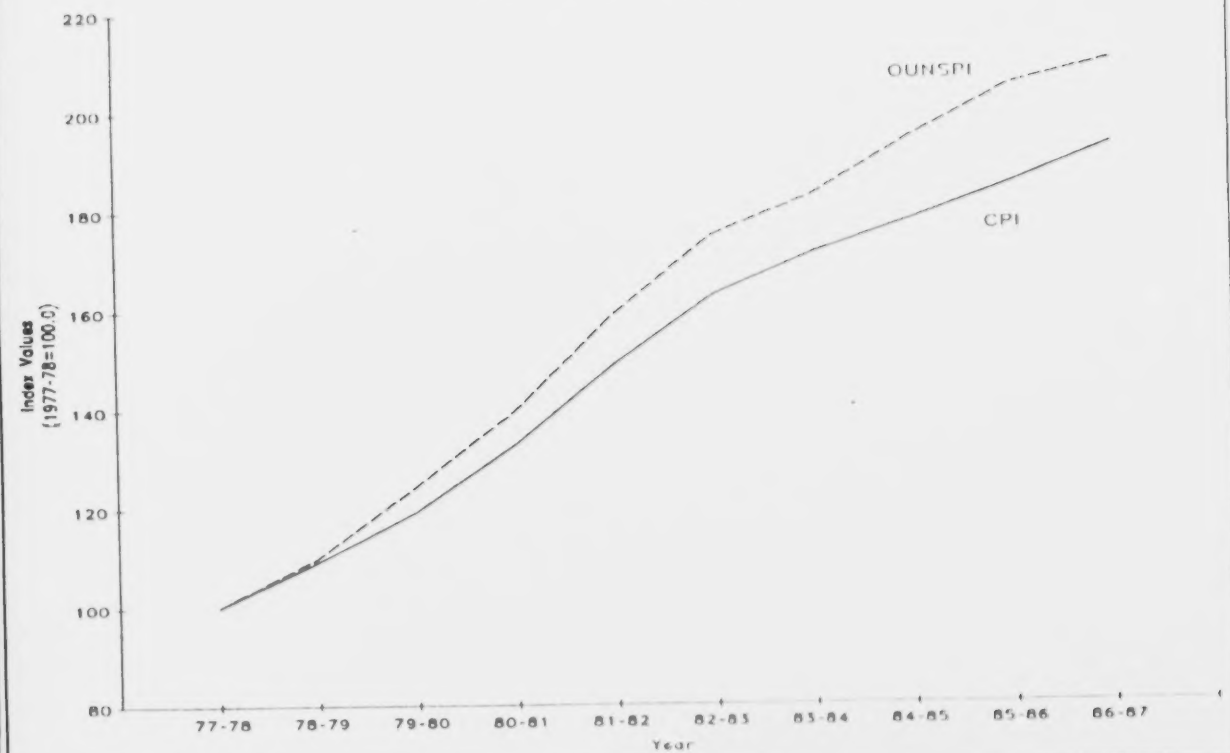


Table 18

Projected Annual Percentage Increases in the Consumer Price Index

|                                                                                     | <u>1987</u>    | <u>1988</u>    | <u>1989</u>    | <u>1990</u>    | <u>1991</u>    | <u>1992</u> |
|-------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-------------|
| <u>Economic Council of Canada</u> <sup>1</sup>                                      | 4.3            | 5.2            | 5.9            | 5.2            | 3.7            | -           |
| <u>Federal Department of Finance</u> <sup>2</sup>                                   | 4.4            | 4.0            | 3.9            | 3.4            | 3.4            | 3.4         |
| <u>Ontario Treasurer</u> <sup>3</sup>                                               | 5.1            | 4.7            | 5.0            | 5.0            | 5.0            | -           |
|                                                                                     | <u>1987-88</u> | <u>1988-89</u> | <u>1989-90</u> | <u>1990-91</u> | <u>1991-92</u> |             |
| <u>Average of Projections Adjusted to University Fiscal Year (May 1 - April 30)</u> | 4.6            | 4.7            | 4.8            | 4.4            | 3.8            |             |

1. Economic Council of Canada, Reaching Outward (Base Case Projection), 1987.
2. Canada Department of Finance, February 1988, Budget, Medium-Term Economic Outlook 1990-93 average increase.
3. Ontario Ministry of Treasury and Economics, Economic Outlook and Fiscal Review, Ontario 1987, December 1987.

Figure 12  
INDEX OF UNIVERSITY EXPENDITURES  
ON LIBRARY ACQUISITIONS  
1977-78 TO 1986-87

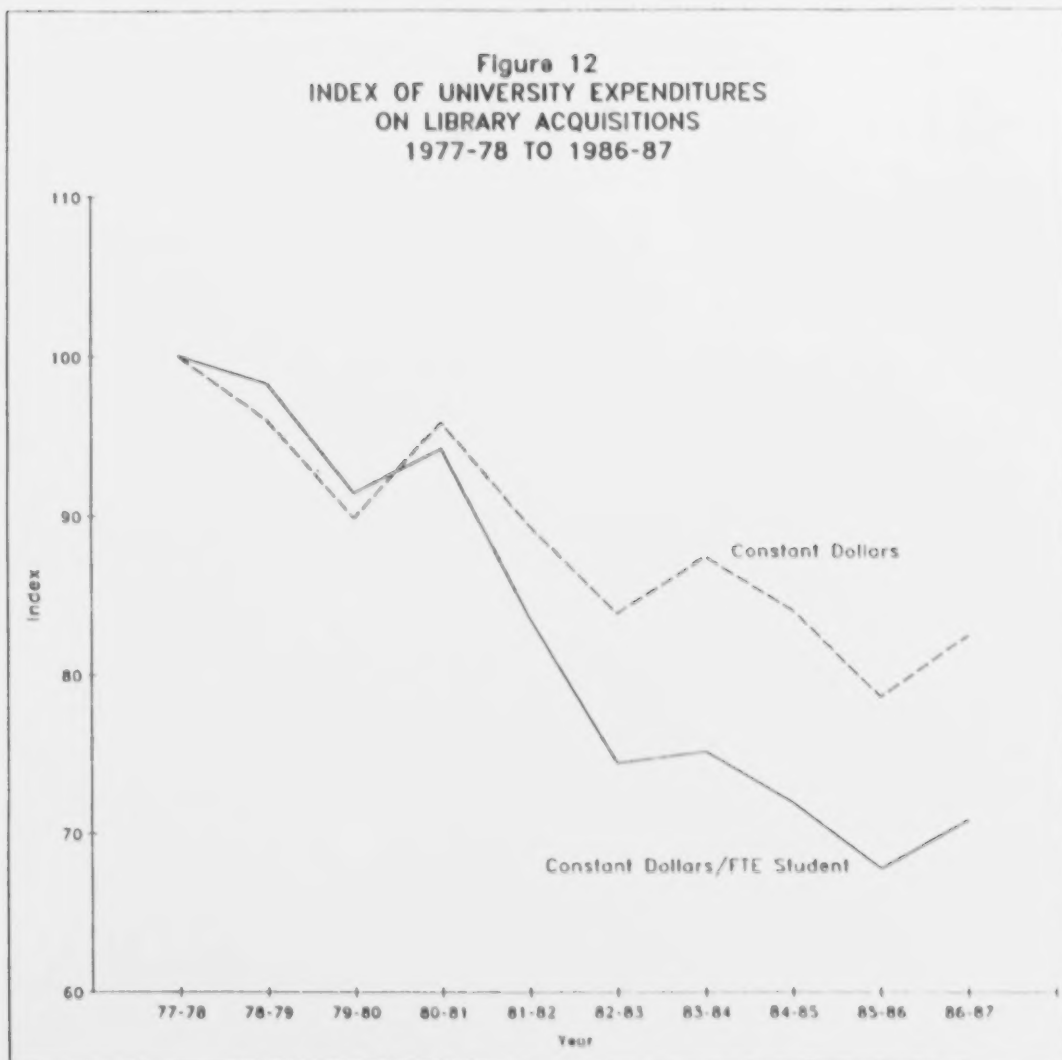


Table 19

Index of Expenditure on Library Acquisitions

|         | Acquisitions<br>as % of<br>Total<br>Operating<br>Expenses | Constant<br>Dollars | Constant<br>Dollars<br>per FTE | Cost<br>Index |
|---------|-----------------------------------------------------------|---------------------|--------------------------------|---------------|
| 1977-78 | 2.0                                                       | 100.0               | 100.0                          | 100.0         |
| 1978-79 | 2.1                                                       | 96.0                | 98.3                           | 115.4         |
| 1979-80 | 2.2                                                       | 89.9                | 91.4                           | 136.5         |
| 1980-81 | 2.3                                                       | 95.9                | 94.2                           | 148.0         |
| 1981-82 | 2.2                                                       | 89.3                | 83.6                           | 168.8         |
| 1982-83 | 2.1                                                       | 83.9                | 74.5                           | 198.1         |
| 1983-84 | 2.2                                                       | 87.4                | 75.2                           | 214.3         |
| 1984-85 | 2.2                                                       | 84.1                | 72.0                           | 236.7         |
| 1985-86 | 2.2                                                       | 78.6                | 67.8                           | 263.8         |
| 1986-87 | 2.2                                                       | 82.5                | 70.9                           | 274.3         |

Source: COFO-UO Financial Report of Ontario Universities,  
various years.  
Bowker (U.S.) Hardcover Book and Periodical.  
Price Indices converted for Canadian dollar  
fluctuations.

Figure 13  
CAPITAL FUNDING FOR UNIVERSITIES, RYERSON AND OCA  
IN ACTUAL & CONSTANT 87-88 DOLLARS  
1964-65 to 1987-88

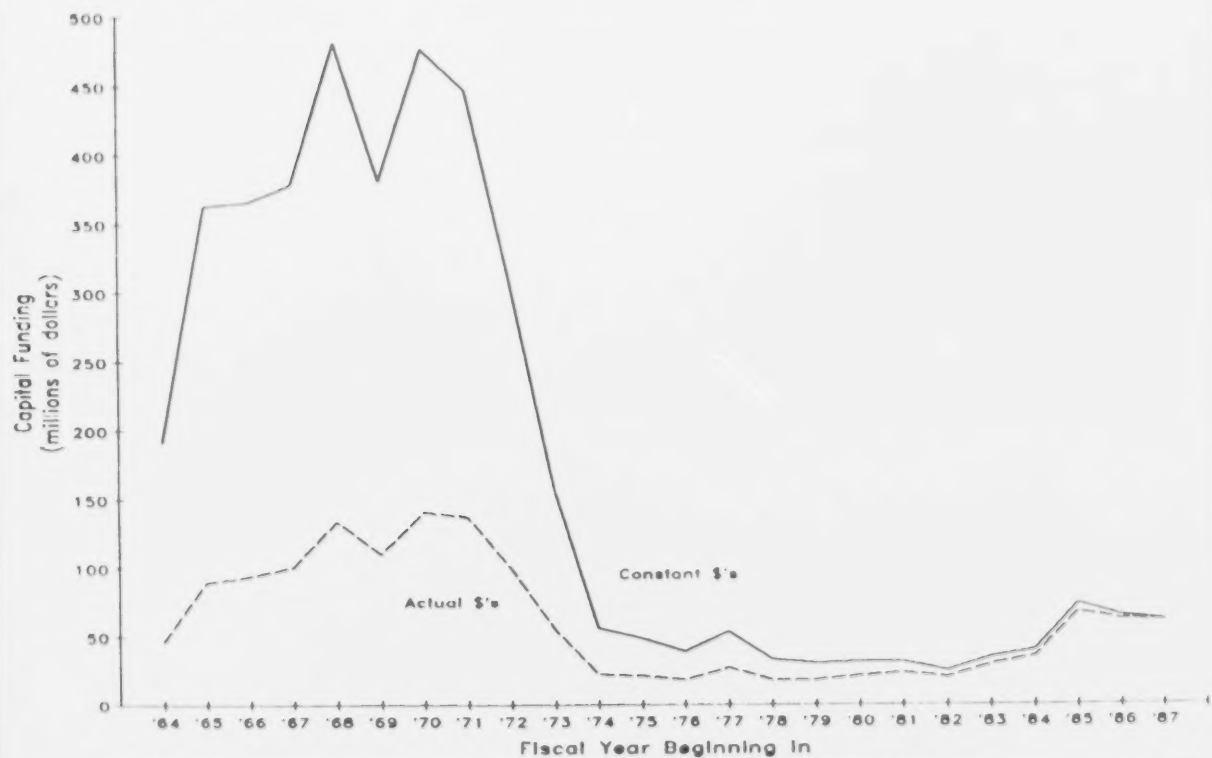


Table 20

Capital Funding for Universities, Ryerson, OCA  
1964-65 to 1987-88

|         | <u>Capital<br/>Funding</u><br>(\$000) | <u>Constant<br/>1987-88 dollars</u><br>(\$000) |
|---------|---------------------------------------|------------------------------------------------|
| 1964-65 | 45,600.0                              | 190,972.5                                      |
| 1965-66 | 89,239.0                              | 362,947.7                                      |
| 1966-67 | 93,105.0                              | 365,624.1                                      |
| 1967-68 | 99,995.0                              | 377,468.2                                      |
| 1968-69 | 132,974.0                             | 480,494.5                                      |
| 1969-70 | 109,253.0                             | 380,525.7                                      |
| 1970-71 | 139,805.0                             | 475,370.6                                      |
| 1971-72 | 136,047.0                             | 445,522.6                                      |
| 1972-73 | 98,712.0                              | 307,463.6                                      |
| 1973-74 | 54,492.0                              | 155,984.6                                      |
| 1974-75 | 21,642.0                              | 55,567.3                                       |
| 1975-76 | 20,593.2                              | 48,082.4                                       |
| 1976-77 | 17,618.7                              | 38,533.0                                       |
| 1977-78 | 26,089.6                              | 52,524.8                                       |
| 1978-79 | 17,498.4                              | 32,278.6                                       |
| 1979-80 | 17,740.5                              | 29,961.7                                       |
| 1980-81 | 20,387.0                              | 30,988.2                                       |
| 1981-82 | 22,891.7                              | 31,011.9                                       |
| 1982-83 | 19,620.3                              | - , 305.5                                      |
| 1983-84 | 28,960.0                              | 34,123.4                                       |
| 1984-85 | 34,742.6                              | 39,40                                          |
| 1985-86 | 67,225.8                              | 73,249.6                                       |
| 1986-87 | 61,217.2                              | 64,040.0                                       |
| 1987-88 | 60,653.0                              | 60,653.0                                       |

Table 21  
Buildings, Land and Site Services  
Total Expenses By Province

1986-87

|                                    | <u>University</u><br><u>Buildings, Land, and Site Services</u><br><u>(\$000)</u> | <u>Building Expenses Per</u><br><u>\$</u> | <u>Estimated FTE Enrolment</u><br><u>Index</u><br><u>Rank</u> |
|------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------|
| British Columbia                   | \$ 16,100                                                                        | \$ 400.33                                 | 69.4 (8)                                                      |
| Alberta                            | 95,710                                                                           | 1,951.16                                  | 338.1 (2)                                                     |
| Saskatchewan                       | 22,746                                                                           | 981.16                                    | 170.0 (3)                                                     |
| Manitoba                           | 10,755                                                                           | 450.27                                    | 78.0 (5)                                                      |
| Quebec                             | 33,811                                                                           | 228.52                                    | 39.6 (10)                                                     |
| New Brunswick                      | 7,540                                                                            | 461.32                                    | 79.9 (4)                                                      |
| P.E.I.                             | 16,093                                                                           | 17,742.31                                 | 3,074.4 (1)                                                   |
| Nova Scotia                        | 11,176                                                                           | 436.54                                    | 75.6 (6)                                                      |
| Newfoundland                       | 5,286                                                                            | 434.24                                    | 75.2 (7)                                                      |
| 9-provinces                        | 239,217                                                                          | 702.65                                    | 121.8 -                                                       |
| Ontario                            | 79,707                                                                           | 375.64                                    | 65.1 (9)                                                      |
| CANADA<br>10-provinces             | \$318,924                                                                        | \$ 577.09                                 | 100.0 -                                                       |
| Source: CAUBO<br>Statistics Canada |                                                                                  |                                           |                                                               |

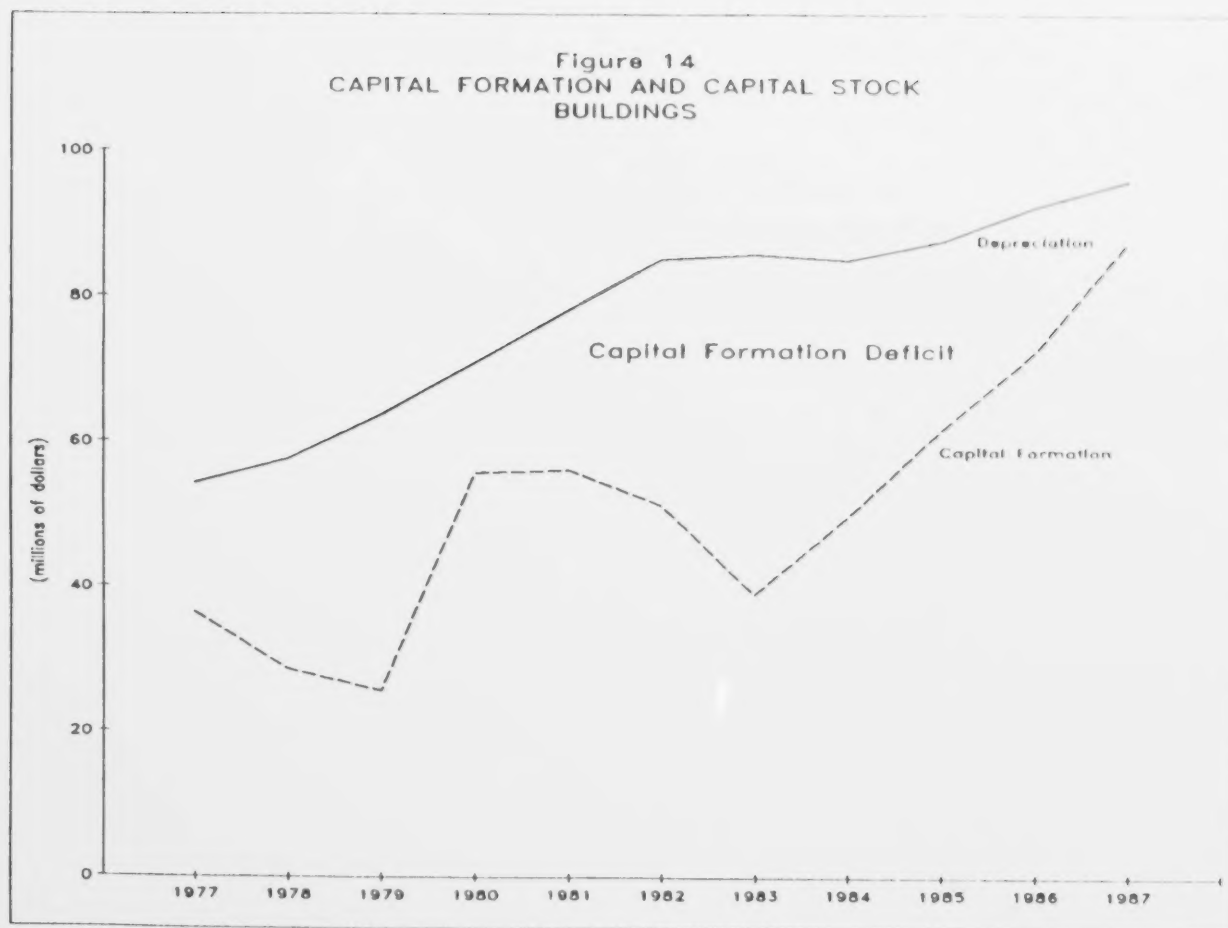


Table 22  
Capital Formation and Capital Stock, Ontario Universities

(\$millions)

| Years   | Mid-Year<br>Net Stock<br>(Current<br>Dollars) | Buildings                           |               |                                     | Mid-Year<br>Net Stock<br>(Current<br>Dollars) | Equipment                           |               |                                     |
|---------|-----------------------------------------------|-------------------------------------|---------------|-------------------------------------|-----------------------------------------------|-------------------------------------|---------------|-------------------------------------|
|         |                                               | Gross Fixed<br>Capital<br>Formation | Depreciation* | Net Fixed**<br>Capital<br>Formation |                                               | Gross Fixed<br>Capital<br>Formation | Depreciation* | Net Fixed**<br>Capital<br>Formation |
| 1977    | 2,072.0                                       | 36.4                                | 54.2          | - 17.8                              | 305.6                                         | 22.1                                | 25.3          | - 3.2                               |
| 1978    | 2,153.2                                       | 28.5                                | 57.5          | - 29.0                              | 336.4                                         | 24.2                                | 29.3          | - 5.1                               |
| 1979    | 2,330.7                                       | 25.5                                | 63.6          | - 38.1                              | 375.0                                         | 27.2                                | 34.1          | - 6.9                               |
| 1980    | 2,547.1                                       | 55.7                                | 70.7          | - 15.0                              | 413.0                                         | 36.5                                | 39.2          | - 2.7                               |
| 1981    | 2,757.8                                       | 56.0                                | 78.0          | - 22.0                              | 448.0                                         | 35.6                                | 44.3          | - 8.7                               |
| 1982    | 2,947.4                                       | 51.3                                | 85.0          | - 33.7                              | 489.4                                         | 41.6                                | 50.4          | - 8.8                               |
| 1983    | 2,904.9                                       | 39.0                                | 85.7          | - 46.7                              | 502.3                                         | 46.6                                | 53.6          | - 7.0                               |
| 1984    | 2,814.6                                       | 49.7                                | 85.0          | - 35.3                              | 535.7                                         | 71.4                                | 58.5          | 12.9                                |
| 1985    | 2,832.7                                       | 61.7                                | 87.6          | - 25.9                              | 581.1                                         | 80.6                                | 63.5          | 17.1                                |
| 1986*** | 2,922.5                                       | 72.4                                | 92.4          | - 20.0                              | 634.0                                         | 110.4                               | 68.2          | 42.2                                |
| 1987*** | 2,974.6                                       | 87.5                                | 95.9          | - 8.4                               | 706.2                                         | 113.6                               | 73.3          | 40.3                                |

\* Capital Consumption Allowances

\*\* Net Fixed Capital Formation equals Gross Fixed Capital Formation minus Depreciation.

\*\*\* Estimates for the two most recent years are based respectively on preliminary and expected investment expenditures.

Source: Statistics Canada.

Figure 15  
CAPITAL FORMATION AND CAPITAL STOCK  
EQUIPMENT

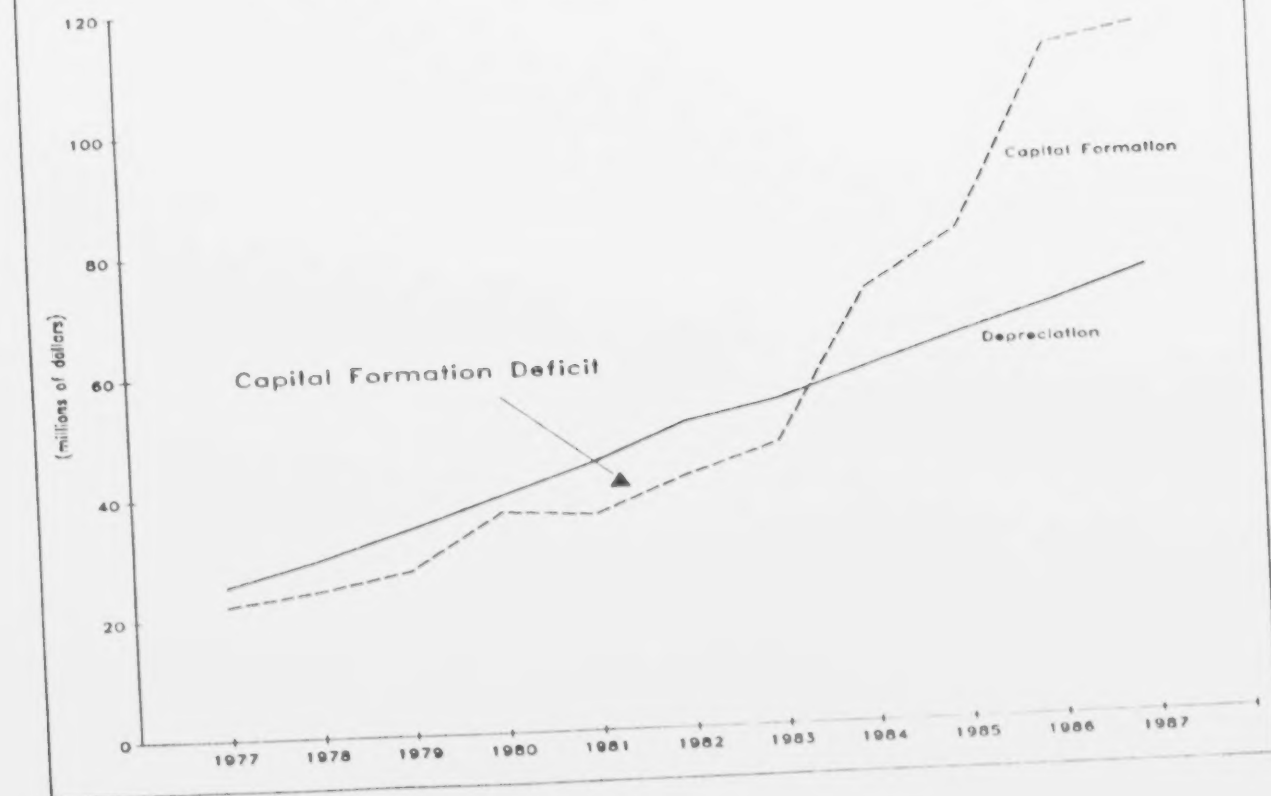


Table 23  
Estimated Gross General Provincial Government Revenue Per Capita  
and as a Percentage of Gross Domestic Product and Provincial Personal Income

1985-86

|                                | Gross Domestic<br>Product<br>(\$000,000's) | %     | Gross General<br>Revenue<br>(Rank) | Provincial<br>Personal Income<br>(\$000,000's) | %     | Gross General<br>Revenue<br>(Rank) | Gross General Revenue Per Capita<br>\$ Index<br>(Canada = 100.0) | (Rank) |      |
|--------------------------------|--------------------------------------------|-------|------------------------------------|------------------------------------------------|-------|------------------------------------|------------------------------------------------------------------|--------|------|
| British Columbia               | 54,103                                     | 19.3  | (9)                                | 46,778                                         | 22.4  | (9)                                | 53,622                                                           | 91.0   | (8)  |
| Alberta                        | 61,968                                     | 23.1  | (6)                                | 39,707                                         | 36.0  | (2)                                | 6,053                                                            | 152.0  | (1)  |
| Saskatchewan                   | 17,297                                     | 22.6  | (7)                                | 14,475                                         | 27.0  | (6)                                | 3,838                                                            | 96.4   | (4)  |
| Manitoba                       | 17,993                                     | 21.7  | (8)                                | 15,890                                         | 24.6  | (8)                                | 3,651                                                            | 91.7   | (7)  |
| Quebec                         | 108,625                                    | 28.0  | (4)                                | 98,475                                         | 30.8  | (5)                                | 4,612                                                            | 115.8  | (2)  |
| New Brunswick                  | 8,823                                      | 31.2  | (3)                                | 8,575                                          | 32.1  | (4)                                | 3,825                                                            | 96.1   | (5)  |
| Nova Scotia                    | 11,631                                     | 25.3  | (5)                                | 11,282                                         | 26.1  | (7)                                | 3,345                                                            | 84.0   | (9)  |
| Prince Edward Island           | 1,317                                      | 35.5  | (2)                                | 1,399                                          | 33.5  | (3)                                | 3,671                                                            | 92.2   | (6)  |
| Newfoundland                   | 6,236                                      | 37.2  | (1)                                | 6,111                                          | 37.8  | (1)                                | 3,990                                                            | 100.2  | (3)  |
| 9 Provinces<br>Outside Ontario | 287,993                                    | 24.82 | -                                  | 242,712                                        | 29.42 | -                                  | 4,400                                                            | 110.5  | -    |
| Ontario                        | 184,354                                    | 15.9  | (10)                               | 157,806                                        | 18.6  | (10)                               | 3,231                                                            | 81.2   | (10) |
| Canada                         | 472,347                                    | 21.32 | -                                  | 400,518                                        | 25.22 | -                                  | 3,981                                                            | 100.0  | -    |

Source: Statistics Canada.

Table 24

Local/Provincial Government "Own Source" Revenue as a Percentage  
of Gross Domestic Product, 1983-84

|                           | <u>Gross Domestic<br/>Product<br/>(\$ millions)</u> | <u>Local/Provincial<br/>"Own Source"<br/>Revenue<br/>(\$ millions)</u> | <u>"Own Source"<br/>Revenue as<br/>% of GDP</u> | <u>RANK</u> |
|---------------------------|-----------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------|-------------|
| British Columbia          | 47,238                                              | 9,963.1                                                                | 21.1                                            | (5)         |
| Alberta                   | 56,539                                              | 14,987.8                                                               | 26.5                                            | (1)         |
| Saskatchewan              | 16,281                                              | 3,774.0                                                                | 23.2                                            | (3)         |
| Manitoba                  | 15,048                                              | 3,286.5                                                                | 21.8                                            | (4)         |
| Quebec                    | 90,432                                              | 23,772.2                                                               | 26.3                                            | (2)         |
| New Brunswick             | 7,348                                               | 1,410.1                                                                | 19.2                                            | (9)         |
| Nova Scotia               | 9,428                                               | 1,892.7                                                                | 20.1                                            | (8)         |
| Prince Edward Island      | 1,198                                               | 245.7                                                                  | 20.5                                            | (7)         |
| Newfoundland              | 5,444                                               | 1,142.2                                                                | 21.0                                            | (6)         |
| 9 Provinces               | 248,956                                             | 60,474.3                                                               | 24.3                                            |             |
| Ontario                   | 151,650                                             | 27,649.7                                                               | 18.2                                            | (10)        |
| Canada                    | 400,606                                             | 88,124.0                                                               | 22.0                                            |             |
| Source: Statistics Canada |                                                     |                                                                        |                                                 |             |

Figure 16  
TAX EFFORT ADJUSTED FOR SURPLUS/DEFICIT  
BY PROVINCE, 1987-88  
(Canada = 100.0)

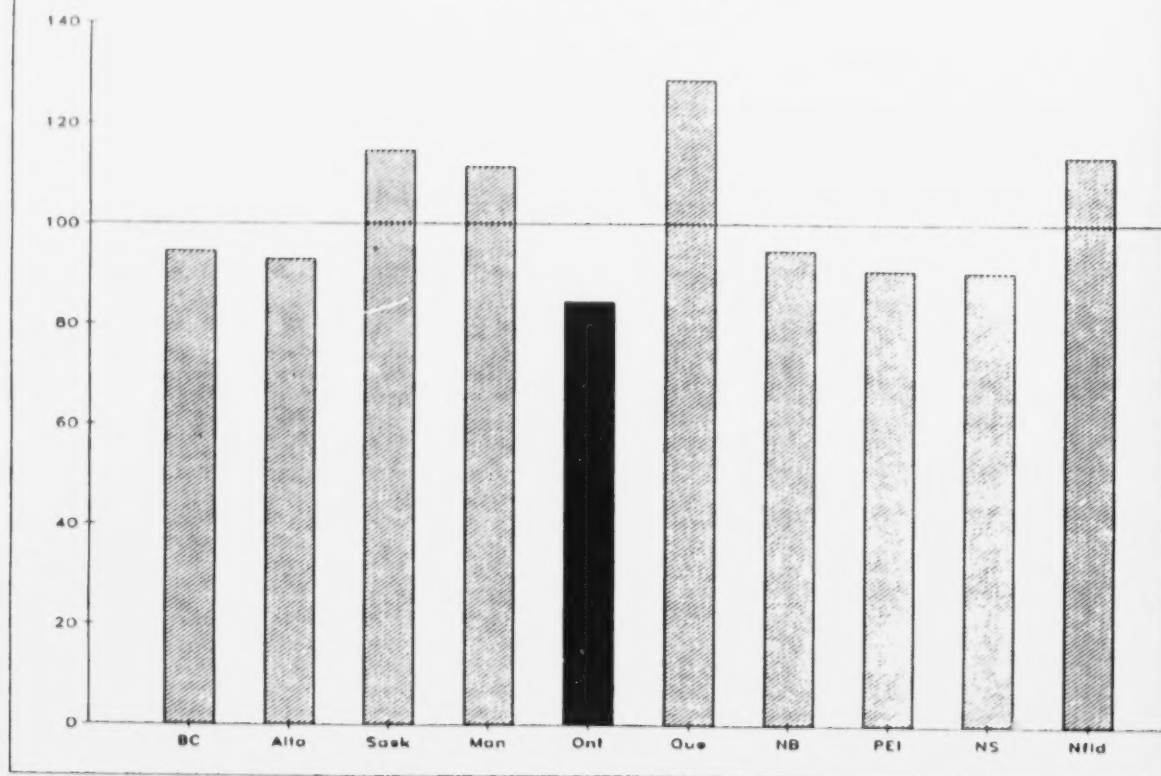


Table 25

Estimated Tax Capacity, Tax Revenue and Tax Effort1987-88

|                      | <u>Estimated<br/>Tax Capacity<br/>Per Capita</u> | <u>Estimated<br/>Tax Revenue<br/>Per Capita</u> | <u>Estimated<br/>Tax Effort<br/>Per Capita</u> | <u>Estimated<br/>Tax Effort Adjusted<br/>for Surplus/Deficit</u> |
|----------------------|--------------------------------------------------|-------------------------------------------------|------------------------------------------------|------------------------------------------------------------------|
| British Columbia     | 100.1                                            | 90.9                                            | 90.8                                           | 96.7                                                             |
| Alberta              | 143.9                                            | 126.6                                           | 88.0                                           | 93.0                                                             |
| Saskatchewan         | 93.1                                             | 91                                              | 98.7                                           | 114.7                                                            |
| Manitoba             | 87.0                                             | 97.5                                            | 112.0                                          | 111.5                                                            |
| Ontario              | 105.5                                            | 91.8                                            | 87.0                                           | 84.7                                                             |
| Quebec               | 87.8                                             | 118.9                                           | 135.5                                          | 128.8                                                            |
| New Brunswick        | 76.7                                             | 69.0                                            | 89.9                                           | 95.0                                                             |
| Prince Edward Island | 71.6                                             | 67.2                                            | 93.8                                           | 91.0                                                             |
| Nova Scotia          | 81.4                                             | 65.1                                            | 80.0                                           | 90.7                                                             |
| Newfoundland         | 68.8                                             | 69.0                                            | 100.3                                          | 111.7                                                            |
| 10 Provinces         | 100.0                                            | 100.0                                           | 100.0                                          | 100.0                                                            |

Note: Tax capacity uses a representative tax system, consisting of the various taxes imposed by provincial governments, to reflect the resources which a government can tax to raise revenue for public purposes. Tax revenue is the relative amount per capita actually raised by provincial governments. (It excludes all federal transfers and local property taxes but includes provincial revenues from natural resources and an estimate of miscellaneous revenue not normally included in federal calculations in regard to equalization payments). Tax effort measures the extent to which a government is actually cultivating the resources available for taxation. Adjusting tax effort, for surpluses and deficits, treats borrowings (where there is a deficit) as a form of revenue and surpluses as a loss of revenues which would otherwise be available for spending.

Sources: Canada Department of Finance, Federal-Provincial Relations Division.  
Statistics Canada.

Figure 17  
OPERATING SURPLUS AND DEFICIT  
ONTARIO GOVERNMENT  
1977-78 to 1988-89

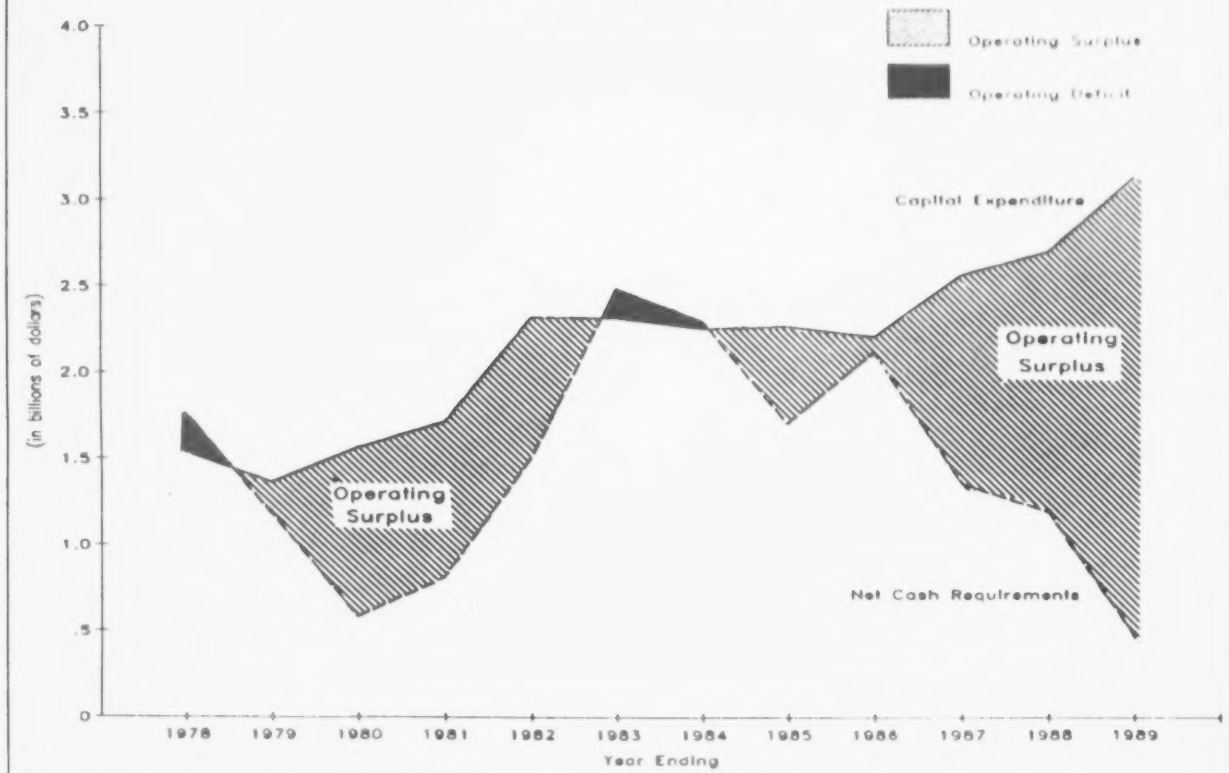


Table 26

## Capital Expenditures and Borrowings

Province of Ontario, 1977-78 to 1988-1989

(\$ millions)

| Year                 | Net<br>Borrowings<br>(1) | Net Cash<br>Requirements<br>(2) | Increase (Decrease)<br>in Liquid Reserves<br>(1) - (2) = (3) | Capital<br>Expenditures<br>(4) | Operating Funds<br>Surplus (Deficit)<br>(4) - (2) = (5)<br>(3+4) - (1) = (5) |
|----------------------|--------------------------|---------------------------------|--------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------|
| 1977-78              | 1,506                    | 1,762                           | (256)                                                        | 1,536                          | (226)                                                                        |
| 1978-79              | 1,652                    | 1,180                           | 472                                                          | 1,361                          | 181                                                                          |
| 1979-80              | 1,132                    | 584                             | 548                                                          | 1,561                          | 977                                                                          |
| 1980-81              | 968                      | 803                             | 165                                                          | 1,709                          | 906                                                                          |
| 1981-82              | 1,363                    | 1,503                           | (140)                                                        | 2,311                          | 808                                                                          |
| 1982-83              | 2,051                    | 2,478                           | (427)                                                        | 2,306                          | (172)                                                                        |
| 1983-84              | 2,860                    | 2,289                           | 571                                                          | 2,244                          | (45)                                                                         |
| 1984-85              | 2,090                    | 1,702                           | 388                                                          | 2,259                          | 557                                                                          |
| 1985-86              | 2,102                    | 2,110*                          | (8)                                                          | 2,199                          | 89                                                                           |
| 1986-87              | 1,194                    | 1,348                           | (154)                                                        | 2,558                          | 1,210                                                                        |
| 1987-88<br>(interim) | 901                      | 1,193                           | (292)                                                        | 2,692                          | 1,499                                                                        |
| 1988-89<br>(budget)  | 755                      | 473                             | 282                                                          | 3,123                          | 2,650                                                                        |

## Notes:

- (1) Proceeds of Loans minus Retirement of Loans.
- (2) Expenditures minus Revenues plus or minus net Non-Budgetary Transactions.
- (3) Cash, temporary investments and marketable securities. The balance at the end of 1986-87 was about \$2 billion.
- (4) Physical assets, buildings and land make up the bulk of this amount.
- (5) Capital expenditures minus net cash requirements equals the surplus or deficit on current, operating expenditures. It is composed of the increase or decrease in liquid reserves plus capital investments and minus net borrowings.

\*Includes Extraordinary Adjustments (net) of \$505 million.

The above Table separates funds raised for operating purposes and funds raised for capital purposes. As shown in column 5, in eight of the current and previous eleven years, all operating fund requirements were met by taxation, federal transfers, or other revenue sources (i.e. no borrowed funds were involved). Net borrowings averaged \$1.5 billion per year, but in most years were used to increase liquid reserves and to finance capital expenditures. Other capital expenditures were financed out of operating funds.

Source: Ontario Budget, various years.  
Public Accounts, various years.

Figure 18  
CANADIAN UNEMPLOYMENT RATES  
BY EDUCATIONAL ATTAINMENT  
1977 to 1987

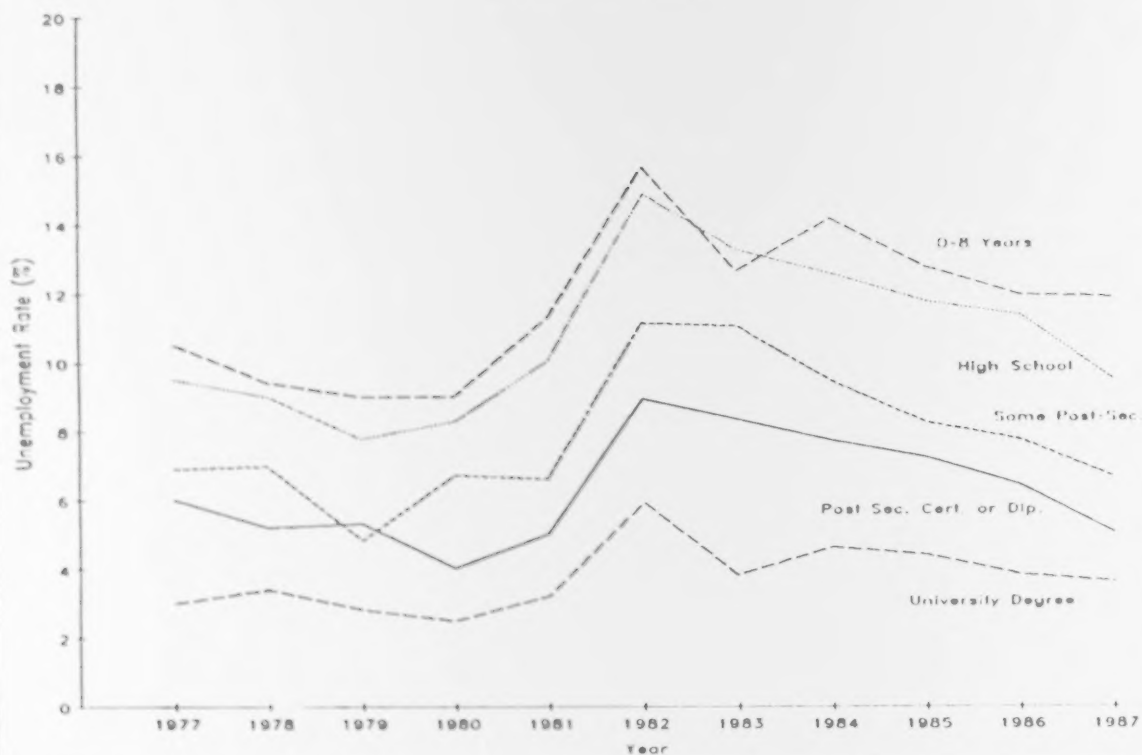


Table 27  
Canadian Unemployment and Participation Rates  
by Educational Attainment  
(Seasonally Unadjusted)

|                                          | <u>Unemployment Rates*</u> |             |             |             |             |             |             |             |             |             |             | Participation**<br>Rates |
|------------------------------------------|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|
|                                          | <u>1977</u>                | <u>1978</u> | <u>1979</u> | <u>1980</u> | <u>1981</u> | <u>1982</u> | <u>1983</u> | <u>1984</u> | <u>1985</u> | <u>1986</u> | <u>1987</u> | <u>1987</u>              |
| Total Canadian Labour Force              | 8.3%                       | 7.9%        | 7.0%        | 7.1%        | 8.5%        | 12.7%       | 11.1%       | 10.7%       | 9.8%        | 9.3%        | 7.9%        | 65.5%                    |
| 0-8 Years                                | 10.5                       | 9.4         | 9.0         | 9.0         | 11.3        | 15.6        | 12.6        | 14.1        | 12.7        | 11.9        | 11.8        | 37.7                     |
| High School                              | 9.5                        | 9.0         | 7.8         | 8.3         | 10.0        | 14.8        | 13.2        | 12.5        | 11.7        | 11.3        | 9.4         | 66.5                     |
| Some Post-Secondary                      | 6.9                        | 7.0         | 4.8         | 6.7         | 6.6         | 11.1        | 11.0        | 9.4         | 8.2         | 7.7         | 6.6         | 70.0                     |
| Post-Secondary<br>Certificate or Diploma | 6.0                        | 5.2         | 5.3         | 4.0         | 5.0         | 8.9         | 8.3         | 7.7         | 7.2         | 6.4         | 5.0         | 80.1                     |
| University Degree                        | 3.0                        | 3.4         | 2.8         | 2.5         | 3.2         | 5.9         | 3.8         | 4.6         | 4.4         | 3.8         | 3.6         | 85.6                     |

Source: Estimates by Educational Attainment, The Labour Force Monthly Report, Statistics Canada.

\* As of December of each year.

\*\* Labour Force percentage of population 15 years and over.

APPENDIX

Appendix  
Update of the  
Ontario University Non-Salary Price Index

The Ontario University Non-Salary Price Index was developed in 1978 to provide "a more sensitive tool to assist in measuring the likely impact of inflation on non-salary expenditure, and a more accurate measure of the extent of inflationary erosion between any two years."\* The OUNSPI measures both component and global price changes for university non-salary expenditure. The components include library acquisitions, equipment and furniture, operational supplies and expenses, utilities, renovations, alterations, and major repairs, externally contracted services, travel, insurance and space rental. In 1984, the OUNSPI was revised to take account of altered patterns of expenditure.

The following tables update both the index values and the price variations to 1986-87:

- Table A-1 provides information on the annual percentage variation of components.
- Table A-2 provides an update of index values for each component based on 1980-81 being equal to 100.0.

Figure A-1 identifies the sources of information for the various components employed in OUNSPI and indicates the index weights employed for each component in the calculation of the overall, non-salary price index.

\* Council of Ontario Universities, Ontario University Non-Salary Price Index, February 1978.

Table A-1

## Annual Percentage Variation in the Ontario University Non-Salary Price Index Components

| Component            | 1971-72 | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 | 1983-84 | 1984-85 | 1985-86 | 1986-87 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Books                | 9.9     | -3.7    | -5.3    | 13.0    | 19.5    | 4.1     | 19.2    | 9.5     | 25.2    | 3.5     | 10.8    | 17.0    | 3.2     | 2.5     | 9.2     | -1.7    |
| Periodicals          | 8.3     | 11.3    | 23.7    | 6.9     | 17.1    | 9.5     | 17.8    | 22.3    | 11.0    | 14.5    | 16.1    | 17.6    | 12.5    | 16.7    | 13.0    | 7.9     |
| Equipment            | 1.4     | 0.4     | 5.2     | 19.2    | 13.1    | 4.6     | 16.5    | 15.0    | 11.1    | 12.5    | 15.3    | 7.3     | 2.8     | 9.1     | 5.8     | 0.6     |
| Computing            | 1.9     | 1.4     | 1.2     | 3.4     | 7.9     | 0.5     | 9.1     | 6.2     | 5.9     | 19.8    | 14.9    | 1.4     | 0.4     | 6.6     | 12.2    | -0.9    |
| Furniture            | 5.0     | 4.7     | 11.0    | 14.8    | 8.5     | 6.1     | 4.9     | 7.0     | 12.8    | 10.4    | 12.3    | 7.2     | 4.5     | 6.7     | 6.0     | 4.7     |
| Stationery and Paper | 1.1     | 2.0     | 20.3    | 33.8    | 9.0     | 3.6     | 5.0     | 9.9     | 17.3    | 14.1    | 9.0     | -0.6    | 0.9     | 10.7    | -0.5    | 6.9     |
| Printing Materials   | 1.7     | 4.5     | 22.7    | 23.5    | 2.2     | -0.7    | 4.2     | 7.2     | 14.2    | 10.0    | 10.3    | 2.6     | 2.7     | 6.7     | 0.1     | 6.0     |
| Tools and Apparatus  | 3.2     | 2.3     | 6.8     | 16.0    | 10.9    | 6.5     | 11.6    | 10.6    | 16.7    | 14.3    | 11.6    | 8.3     | 4.3     | 5.9     | 5.0     | 3.5     |
| Chemicals            | 1.1     | 1.8     | 11.0    | 30.5    | 10.0    | 4.2     | 6.0     | 8.7     | 16.7    | 15.0    | 12.7    | 5.0     | 3.3     | 2.7     | 2.1     | 0.1     |
| Postage              | 12.3    | 7.6     | -       | -       | 0.4     | 19.3    | 25.3    | 17.0    | 19.6    | 0.2     | 24.2    | 40.9    | 5.1     | 0.0     | 10.8    | 2.5     |
| Long Distance        | 2.6     | 4.5     | 1.9     | 1.0     | 3.7     | 7.4     | 9.3     | 5.6     | 3.5     | 4.5     | 11.5    | 15.1    | 5.4     | 1.4     | 1.1     | -0.6    |
| Electricity          | 4.9     | 6.9     | 8.0     | 8.2     | 9.4     | 28.3    | 28.3    | 5.3     | 10.4    | 11.7    | 9.8     | 9.7     | 8.3     | 8.1     | 6.5     | 4.6     |
| Gas                  | 1.5     | 0.4     | 4.9     | 12.4    | 25.8    | 22.1    | 15.6    | 14.6    | 5.5     | 17.9    | 26.5    | 22.0    | 5.0     | 1.4     | 0.0     | -0.6    |
| Oil                  | 11.7    | -3.3    | 54.4    | 52.1    | 10.1    | 18.5    | 20.8    | 14.8    | 26.8    | 22.4    | 24.6    | 7.4     | 13.7    | 11.9    | -5.2    | -37.6   |
| Telephone            | 2.6     | 4.5     | 1.9     | 1.0     | 3.7     | 7.4     | 9.3     | 5.6     | 3.5     | 4.5     | 11.5    | 15.1    | 5.4     | 1.4     | 1.1     | -0.6    |
| Water                | -       | -       | -       | 7.7     | 8.5     | 12.3    | 11.7    | 7.6     | 7.3     | 8.3     | 12.4    | 11.7    | 6.7     | 6.5     | 6.5     | 3.1     |
| Renovations          | 4.4     | 5.2     | 11.9    | 19.0    | 5.5     | 5.6     | 6.8     | 11.1    | 15.1    | 9.4     | 9.7     | 4.8     | 4.6     | 3.3     | 4.4     | 5.0     |
| Transportation       | 3.9     | 1.8     | 5.0     | 11.0    | 12.2    | 9.2     | 6.0     | 6.6     | 11.4    | 14.4    | 18.1    | 10.7    | 4.7     | 3.9     | 5.0     | 2.0     |
| Shelter              | 5.3     | 6.0     | 6.5     | 7.7     | 9.7     | 10.9    | 8.5     | 6.7     | 5.5     | 7.6     | 12.5    | 11.0    | 5.7     | 3.8     | 3.5     | 3.3     |
| Food Away From Home  | 4.5     | 7.6     | 15.7    | 18.4    | 11.9    | 7.4     | 5.3     | 8.7     | 12.1    | 8.5     | 9.9     | 9.6     | 4.5     | 4.0     | 4.3     | 4.9     |
| Insurance            | 28.5    | 20.9    | 22.4    | 13.2    | 26.0    | 21.2    | 12.2    | 5.9     | 5.8     | 8.9     | 20.0    | 8.4     | 5.6     | 2.8     | 5.4     | 10.5    |
| Space Rental         | 5.3     | 6.0     | 6.5     | 7.7     | 9.7     | 10.9    | 8.5     | 6.7     | 5.5     | 7.6     | 12.5    | 11.0    | 5.7     | 3.8     | 3.5     | 3.3     |

e = estimated figure

Table A-2

## Component Price Indices in the Ontario University Non-Salary Price Index

(Based on the Fiscal Year 1980-81 = 100)

| Components           | 1970-71 | 1971-72 | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 | 1983-84 | 1984-85 | 1985-86 | 1986-87 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Books                | 42.0    | 46.1    | 44.4    | 42.0    | 47.5    | 56.8    | 59.1    | 70.5    | 77.2    | 96.6    | 100.0   | 110.8   | 129.6   | 133.8   | 137.2   | 149.8   | 147.2   |
| Periodicals          | 26.7    | 29.0    | 32.2    | 39.8    | 42.6    | 49.9    | 54.6    | 64.3    | 78.7    | 87.4    | 100.0   | 116.1   | 136.5   | 153.6   | 179.3   | 202.7   | 218.6   |
| Equipment            | 39.6    | 40.1    | 40.3    | 42.4    | 50.5    | 57.1    | 59.7    | 69.6    | 80.0    | 88.9    | 100.0   | 115.3   | 123.7   | 127.2   | 138.8   | 146.9   | 147.8   |
| Computing            | 58.0    | 59.1    | 60.0    | 60.7    | 62.7    | 67.7    | 68.0    | 74.2    | 78.8    | 83.5    | 100.0   | 114.9   | 116.5   | 117.0   | 124.7   | 139.9   | 138.6   |
| Furniture            | 44.4    | 46.6    | 48.8    | 54.1    | 62.1    | 67.4    | 71.5    | 75.0    | 80.3    | 90.5    | 100.0   | 112.3   | 120.3   | 125.7   | 134.1   | 142.1   | 148.8   |
| Stationery and Paper | 34.5    | 34.9    | 35.6    | 42.8    | 57.3    | 62.4    | 64.7    | 68.0    | 74.7    | 87.6    | 100.0   | 109.0   | 108.4   | 109.3   | 121.0   | 120.4   | 128.7   |
| Printing Materials   | 43.6    | 44.4    | 46.4    | 56.9    | 70.3    | 71.8    | 71.3    | 74.2    | 79.6    | 90.9    | 100.0   | 110.3   | 113.2   | 116.2   | 124.0   | 124.2   | 131.6   |
| Tools and Apparatus  | 39.3    | 40.6    | 41.5    | 44.3    | 51.4    | 57.1    | 60.7    | 67.8    | 74.9    | 87.5    | 100.0   | 111.6   | 120.9   | 126.1   | 133.5   | 140.2   | 145.1   |
| Chemicals            | 37.9    | 38.3    | 39.0    | 43.3    | 56.4    | 62.1    | 64.7    | 68.6    | 74.5    | 86.9    | 100.0   | 112.7   | 118.3   | 122.2   | 125.6   | 128.2   | 128.3   |
| Postage              | 39.3    | 44.2    | 47.5    | 47.5    | 47.5    | 47.7    | 56.9    | 71.3    | 83.4    | 99.8    | 100.0   | 124.2   | 175.0   | 183.9   | 183.9   | 203.7   | 208.8   |
| Long Distance        | 65.2    | 66.9    | 69.9    | 71.2    | 72.0    | 74.6    | 80.2    | 87.6    | 92.5    | 95.7    | 100.0   | 111.5   | 128.4   | 135.3   | 137.1   | 138.6   | 137.7   |
| Electricity          | 32.7    | 34.3    | 36.6    | 39.6    | 42.8    | 46.8    | 60.0    | 77.0    | 81.1    | 89.5    | 100.0   | 109.8   | 120.5   | 130.5   | 141.1   | 150.2   | 157.2   |
| Gas                  | 32.9    | 33.4    | 33.5    | 35.1    | 39.5    | 49.7    | 60.7    | 70.2    | 80.4    | 84.8    | 100.0   | 126.5   | 154.3   | 162.0   | 164.3   | 164.3   | 163.3   |
| Oil                  | 14.0    | 15.7    | 15.2    | 23.4    | 35.6    | 39.2    | 46.5    | 56.2    | 64.5    | 81.7    | 100.0   | 124.6   | 133.8   | 152.2   | 170.3   | 161.5   | 100.7   |
| Telephone            | 65.2    | 66.9    | 68.9    | 71.2    | 72.0    | 74.6    | 80.2    | 87.6    | 92.5    | 95.7    | 100.0   | 111.5   | 128.4   | 135.3   | 137.1   | 138.6   | 137.7   |
| Water                | 54.5    | 54.5    | 54.5    | 54.5    | 58.7    | 63.7    | 71.6    | 80.0    | 86.0    | 92.3    | 100.0   | 112.4   | 125.5   | 134.0   | 142.8   | 152.1   | 156.8   |
| Renovations          | 4.      | 42.9    | 45.1    | 50.5    | 60.0    | 63.4    | 66.9    | 71.5    | 79.4    | 91.4    | 100.0   | 109.7   | 115.0   | 120.2   | 124.2   | 129.6   | 136.1   |
| Transportation       | 46.0    | 47.7    | 48.6    | 51.1    | 56.7    | 63.6    | 68.5    | 73.7    | 78.5    | 87.4    | 100.0   | 118.1   | 130.7   | 136.7   | 142.1   | 149.2   | 152.1   |
| Shelter              | 48.9    | 51.4    | 54.5    | 58.1    | 62.6    | 68.6    | 76.1    | 82.6    | 88.1    | 93.0    | 100.0   | 112.5   | 124.8   | 131.9   | 136.9   | 141.7   | 146.3   |
| Food Away From Home  | 38.8    | 40.5    | 43.6    | 50.4    | 59.7    | 66.8    | 71.8    | 75.6    | 82.2    | 92.1    | 100.0   | 109.9   | 120.4   | 125.8   | 130.9   | 136.5   | 143.2   |
| Insurance            | 22.2    | 28.6    | 34.5    | 42.3    | 47.8    | 60.3    | 73.0    | 82.0    | 86.8    | 91.9    | 100.0   | 120.0   | 130.1   | 137.3   | 141.2   | 148.8   | 164.5   |
| Space Rental         | 48.9    | 51.4    | 54.5    | 58.1    | 62.6    | 68.6    | 76.1    | 82.6    | 88.1    | 93.0    | 100.0   | 112.5   | 124.8   | 131.9   | 136.9   | 141.7   | 146.3   |

e = estimated figure.

Figure A-1  
Source and Weighting Pattern of Component Indices

| <u>Component</u>     | <u>Index Weight</u> | <u>Source</u>                                                                                                                                                   |
|----------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Books                | 7                   | Bowker (U.S.) Hardcover Book Price Index, converted for Canadian dollar fluctuations                                                                            |
| Periodicals          | 7                   | Bowker (U.S.) Periodical Price Index, converted for Canadian dollar fluctuations                                                                                |
| Equipment            | 10                  | U.S. Department of Commerce. Survey of Current Business. Price index for machinery and equipment, converted for Canadian dollar fluctuations                    |
| Computing            | 10                  | Research Associates of Washington. Higher Education Prices and Price Indexes: 1986 Update. Data processing hardware. Converted for Canadian dollar fluctuations |
| Furniture            | 2                   | Statistics Canada Industrial Product Price Index - Office Furniture Industries                                                                                  |
| Stationery and Paper | 8                   | Statistics Canada Industrial Product Price Index - Paper and Allied Product Industries                                                                          |
| Printing Materials   | 7                   | Statistics Canada Industrial Product Price Index - Fine Papers                                                                                                  |
| Tools and Apparatus  | 8                   | Statistics Canada Industrial Product Price Index - Hardware, Tool and Cutlery Industries                                                                        |
| Chemicals            | 4                   | Statistics Canada Industrial Product Price Index - Chemical & Chemical Products Industries                                                                      |
| Postage              | 3                   | Statistics Canada Consumer Price Index - Postage                                                                                                                |
| Long Distance        | 2                   | Statistics Canada Consumer Price Index - Communications                                                                                                         |
| Electricity          | 9                   | Statistics Canada Industry Selling Price Index - Electric Power Selling Price Index (Non-Residential) over 5,000 KW - Ontario                                   |
| Gas                  | 7                   | Statistics Canada Consumer Price Index - Piped and Bottled Gas                                                                                                  |
| Oil                  | 1                   | Statistics Canada Industrial Product Price Index - Heavy Fuel Oil                                                                                               |
| Telephone            | 4                   | Statistics Canada Consumer Price Index - Communications                                                                                                         |
| Water                | 1                   | Statistics Canada Consumer Price Index - Water                                                                                                                  |
| Renovations          | 3                   | Statistics Canada Construction Building Material Price Index - Non-Residential                                                                                  |
| Transportation       | 3                   | Statistics Canada Consumer Price Index - Transportation                                                                                                         |
| Shelter              | 1                   | Statistics Canada Consumer Price Index - Shelter                                                                                                                |
| Food Away From Home  | 1                   | Statistics Canada Consumer Price Index - Food Purchased From Restaurants                                                                                        |
| Insurance            | 1                   | Statistics Canada Consumer Price Index - Homeowner's Insurance Premiums                                                                                         |
| Space Rental         | 1                   | Statistics Canada Consumer Price Index - Shelter                                                                                                                |